AFTER THE
BATTLE
ENTERING THE
HIER IST DIE
THE VOLKSWAGEN STORY
THE BATTLE OF TAKROUNA
AMERICA'S PRESERVED WARSHIPS
WRECKOLOGY IN HOLLAND
Number 12

# AFTER THE BATTLE

## NUMBER 12

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**Front Cover:** As a cover illustration to this issue, we decided to restore an early split-back window Volkswagen (ours is a LHD 1951 ex-Swiss registration); a model which was still produced from the original presses. This was finished as one of the early REME production vehicles, circa 1946, being used by the Allied Control Commission Germany.

We then mocked up a realistic location at Stratford in East London to simulate post-war Germany. Ex-WO2 Ken Driscoll, our real ex-REME veteran of North Africa, Sicily, Italy and Germany, who regularly works on the production of **After the Battle**, was persuaded to don his uniform once more.

**Centre pages:** The USS North Carolina, 'The Immortal Showboat', preserved on Cape Fear River, Wilmington, North Carolina.

**Back Cover:** The beautiful Enfidaville War Cemetery situated beside the road to Takrouna.

**Acknowledgements:**
Lieutenant-Commander Peter Scott extracted from *The Eye of the Wind* by Peter Scott, Hodder & Stoughton. The Secret Underground Railway Executive H.Q. reprinted from *The Railway Gazette*. It Happened Here based on *How It Happened Here* by Kevin Brownlow, Martin Secker & Warburg. Photographs credited to the Imperial War Museum London are designated IWM

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**Above: The Hotel Kaiserhof on the Wilhelmplatz, Berlin where Adolf Hitler met Dr. Ferdinand Porsche, future designer of Germany's Peoples Car, on May 11, 1933 (Allgemeiner Deutscher Nachrichtendienst).**

**Above: the ruin of the Kaiserhof photographed in 1947 (Landesbildstelle). Below: The Hotel Kaiserhof was not rebuilt after the war. This is the site today in East Berlin.**

# THE VOLKSWAGEN STORY

In September 1974, the 18 millionth Volkswagen Beetle was constructed at VW's Emden factory near Hannover, this company having already exceeded the previous record total of cars produced held by the Model T Ford. It is fair to say that had it not been for the efforts of the British during the immediate post-war years, and, in particular, a Military Government team led by Major Ivan Hirst of the Royal Electrical and Mechanical Engineers, there would be no Volkswagens on the road today.

The story begins in the Kaiserhof Hotel in Berlin on May 11, 1933, when Dr. Ferdinand Porsche, inventive designer and one-time racing driver, met with Adolf Hitler whereupon the latter expounded his views for a 'People's Car'. Dr. Porsche had already been working on a cheap car design for N.S.U. and when Hitler outlined his essentials for a 'Kleinauto' their ideas were complementary. Hitler, insisted, however, that the car should not use more than seven litres of petrol per 100 kilometres (approx. 40 mpg), one litre less than Dr. Porsche proposed; be a four-seater, able to maintain 100 kph on the new autobahns being constructed; air-cooled (because of the severe winter in parts of Germany and the scarcity of garages); the final requirement being that it should sell for under 1000RM (approximately £50).

The following year at the Berlin Automobile Show, Hitler was able to announce that 'due to the superb designer Porsche and his staff, we have succeeded in completing preliminary

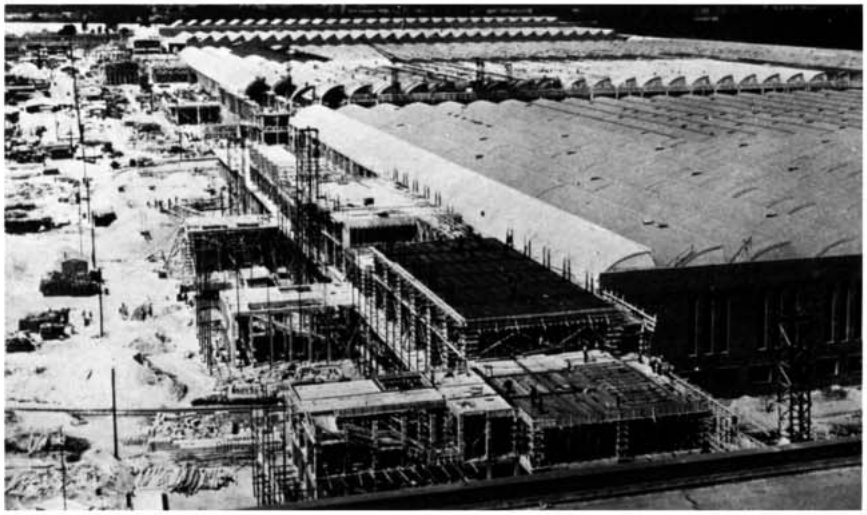
**Top: Hitler lays the foundation stone to the 'Kraft-durch-Freude' factory near Fallersleben on May 26, 1938. Dr. Porsche, hat in hand, stands on the right (Associated Press). Above: The KdF Type 38 convertible No. 31 which belonged to Dr. Ley now preserved in the factory museum.**

designs for a German People's Car'. Official road testing of the first three Volksautos (as the German and US press were calling them) began on October 12, 1936. By Christmas that year they had completed 30,000 miles. Perhaps the worst fault to emerge from this testing was continual breakage of the cast crankshafts, which caused the adoption of forged shafts which has continued to this day.

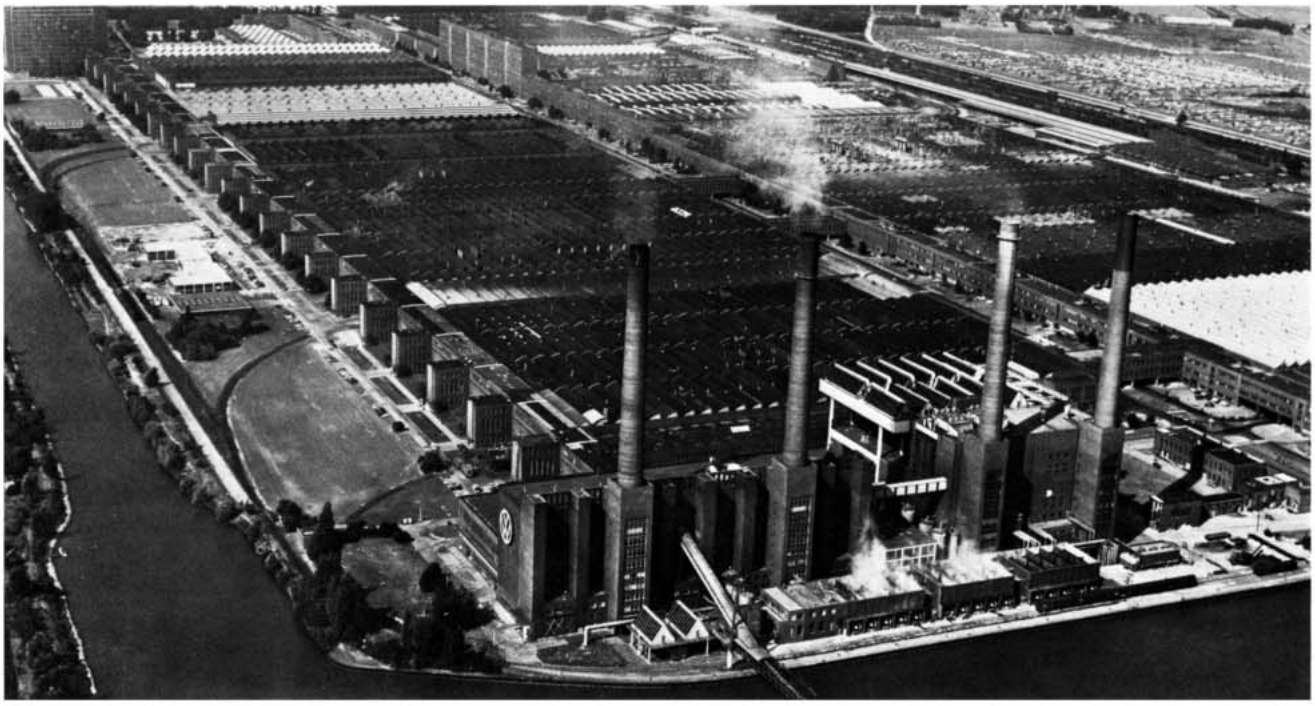
Dr. Porsche, however, was not present at the beginning of the tests as he had decided it would be necessary to study American mass production techniques if the car was to be produced in sufficient numbers and to Hitler's price. He had arrived in New York on October 8 and during the following month toured all the major US automobile factories. On his way back to Germany in the *Queen Mary* he travelled to Great Britain to visit the Austin factory at Longbridge, near Birmingham. A further US trip followed in 1937 to recruit American workers to form the nucleus of the factory staff that Dr. Porsche considered necessary to produce the car using American production methods. In this he was not very successful, and only twenty Americans, mostly of German extraction, signed. Two of the early recruits, Joseph Werner from Fords and Otto Hoehne ex-International Harvester Company, are still at Volkswagen today.

Hitler proposed that Deutsche Arbeitsfront, the German Labour Front which he had established under Dr. Robert Ley, should be responsible for building the factory and the car. The project was an ideal one for the subsidiary organisation 'Kraft-durch-Freude' or Strength Through Joy, which was formed with the intention of improving living standards for German workers. A company was created in May 1937, the Gesellschaft zur Vorbereitung des Volkswagens, to produce the anticipated total of 1,500,000 cars.

Hitler intended that within ten years there would be no working person in Germany who did not own a people's car. An ingenious stamp saving scheme was inaugurated on August 1, 1938 where for 5RM per week, a German could order a VW for delivery when the cars were in production. Some 336,668 people took out savings cards and eventually saved 280 million marks.

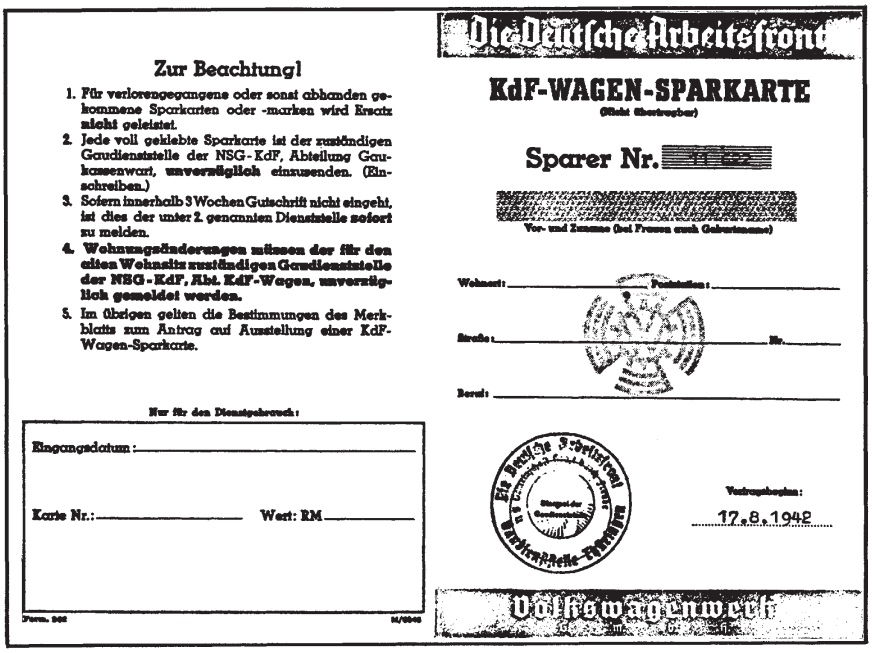


**Top: Construction of the factory in 1939 which (right) the US Eighth Air Force did its best to knock down (USAF). Below, The rebuilt factory today.**



A site was chosen on land owned by Count Werner von Schulenburg, who lived in a fourteenth-century castle, Schloss Wolfsburg, near Fallersleben about fifty miles east of Hannover. By January 1938, ten thousand acres were transferred to the State. Hitler's architect Albert Speer, whilst remaining consultant, designated a young Austrian, Peter Koller, to design the factory. It was to be a mile long on the north side of the Mittelland Canal whilst a town for the proposed 90,000 workpeople was to be built the other side of the canal. In the middle of the Czecho-slovakian crisis in May 1938, Hitler found time to lay the cornerstone of the factory on May 26, watched by a crowd estimated at 70,000. Unfortunately, however, a plan of the building arrived too late to be placed in the metal container in the foundation stone, which had to be sealed without it. In his speech Hitler named the future car, much to the surprise of Dr. Porsche, the 'KdF-Wagen'. Unofficially the car had been called the Volkswagen and this had already led an engine designer at Dr. Porsche's office, Francis Reimspiess, to design the now famous VW emblem, originally surrounded by a spinning swastika, without ever being asked to do so. (When Dr. Porsche saw the emblem, he rewarded Reimspiess with a 100-mark bonus.) After the ceremony, Hitler sat in one of the three prototypes (out of the sixty that had been hand-built at the Daimler-Benz plant at Stuttgart) and had Dr. Porsche's son, Ferry, drive him to Fallersleben railway station in it.

Construction of the factory was hampered by the lack of local labour. This problem Hitler solved by asking Mussolini to send him unemployed Italian workers. The first thousand soon arrived, but in spite of these efforts no cars had been produced at the factory by the time war started. The 210 gloss-black KdF-Wagens which had been produced elsewhere were either destroyed during testing or were given to officials of the Nazi Party.



Die Deutsche Arbeitsfront

**KdF-WAGEN-SPARKARTE**

(Nicht übertragbar)

**Sparer Nr.** [redacted]

Vor- und Zuname (bei Frauen auch Geburtsname)

Wohnort: _____ Postleitzahl: _____

Straße: _____ Nr. _____

Beruf: _____

Zur Beachtung!

1. Für verlorengegangene oder sonst abhanden gekommene Sparkarten oder -marken wird Ersatz nicht geleistet.
2. Jede voll geklebte Sparkarte ist der zuständigen Gaudienststelle der NSG-KdF, Abteilung Gaukassenwart, unverzüglich einzusenden. (Einschreiben.)
3. Sofern innerhalb 3 Wochen Gutschrift nicht eingeht, ist dies der unter 2. genannten Dienststelle sofort zu melden.
4. Wohnungsänderungen müssen der für den alten Wohnsitz zuständigen Gaudienststelle der NSG-KdF, Abt. KdF-Wagen, unverzüglich gemeldet werden.
5. Im übrigen gelten die Bestimmungen des Merkblatts zum Antrag auf Ausstellung einer KdF-Wagen-Sparkarte.

Nur für den Dienstgebrauch:

Eingangsdatum: _____

Karte Nr.: _____ Wert: RM _____

Für Deutsche Staatsangehörige in [illegible]

Ortsgruppe der Gauleitung

Vertragsbeginn: 17.8.1942

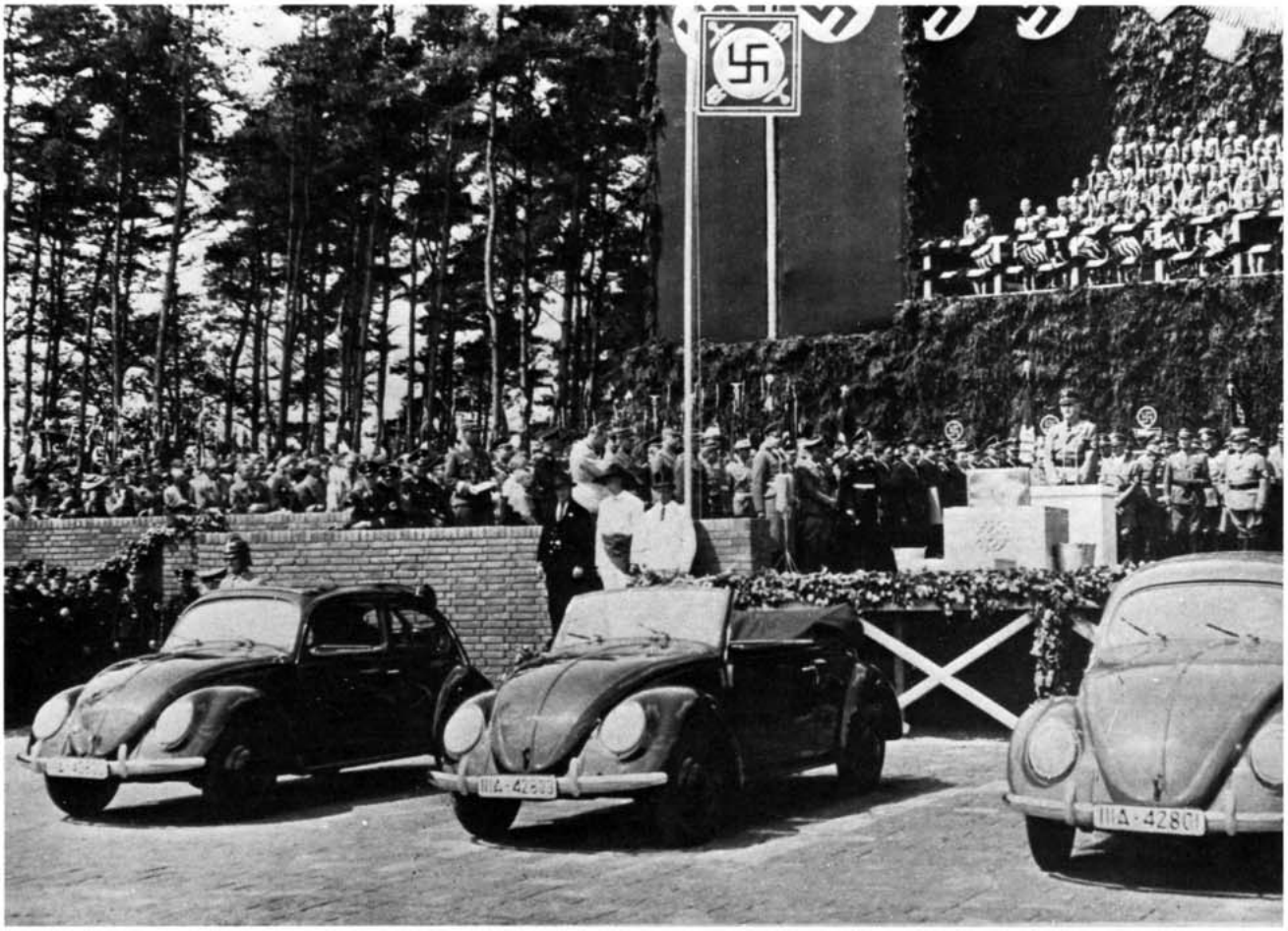
Volkswagenwerk

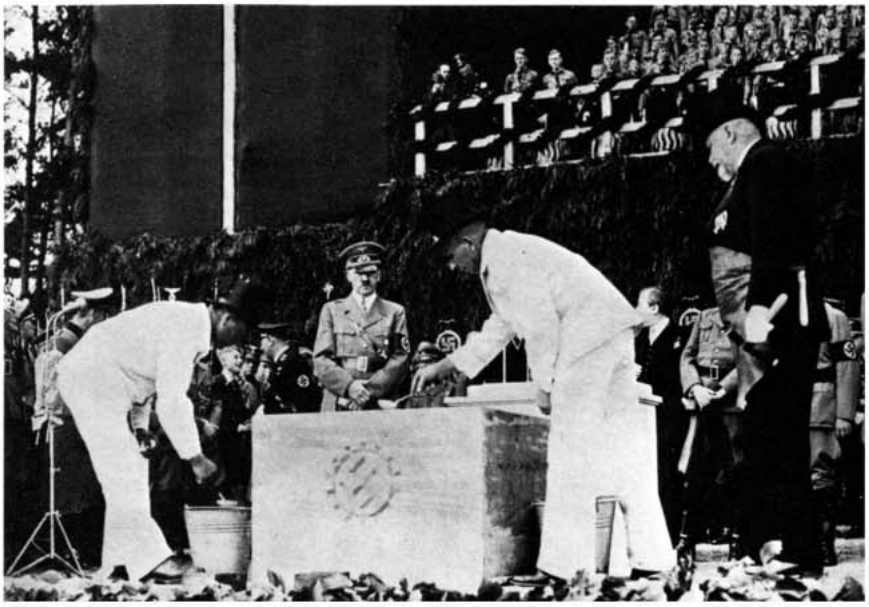
**A reproduction of KdF savers card No. 11,622. Volkswagen would still honour a card today.**

None were delivered to the thousands of stamp savers. By the end of 1940, when building operations ceased, only 2,690,000 square feet of the planned 6 million square feet had been roofed. The town was still not marked on any maps and consisted of flats for 2,358 families. The Italian workers, who had been accommodated in wooden huts, were gradually withdrawn after the outbreak of war. The labour force was then increased with captured Poles, followed by Frenchmen, Belgians, Dutchmen, Danes and Russians, who eventually totalled 17,365 in 1944.

Two military versions of the car were produced: the four-seat cross-country Kubelwagen, which made up for its lack of four-wheel drive by lightness (1100 lbs for ease of manhandling if bogged down), and the

**Below: Dr. Ley speaks at the foundation stone ceremony at which three of the KdF-Wagen prototypes were on display. Note Hitler's personal standard above the stand.**





Left: German builders dressed in traditional top hats cement the empty bronze box in the stone. The box should have contained plans of the building but these arrived too late to be included. Above: Examining the box today.

amphibious Schwimmwagen with its retractable propellor. Some 55,000 Kubelwagens and 15,000 Schwimmwagens were assembled at the factory—the square Kubelwagen bodies being made at the Ambi-Budd body plant in Berlin.

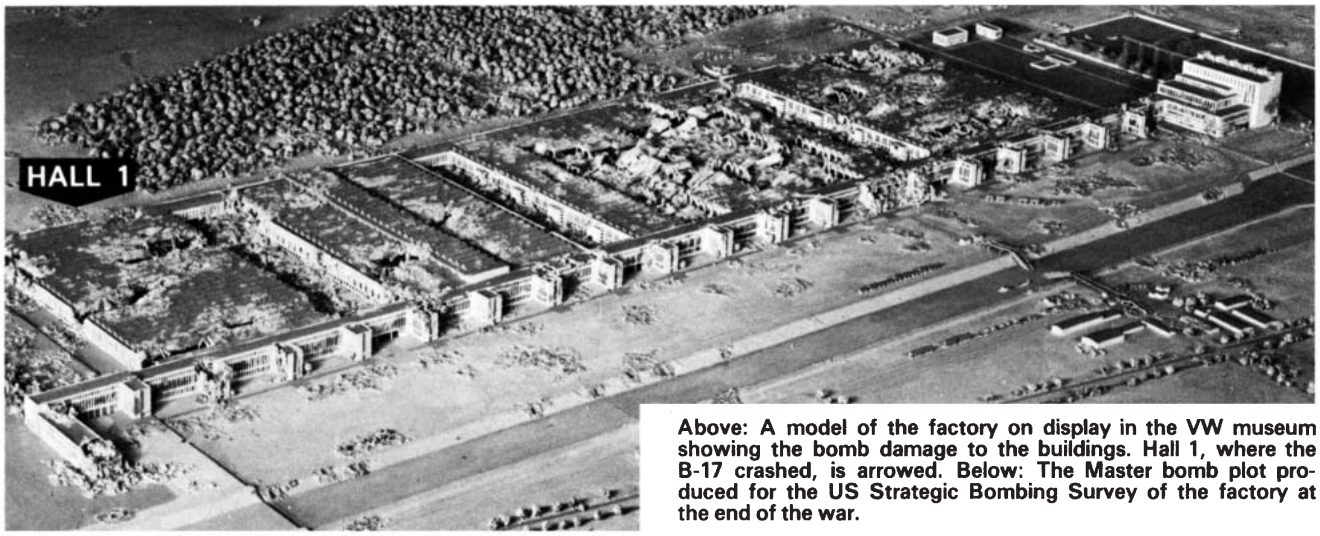
In the end only a small part of the factory was used by the German Ministry of Armaments for vehicle production. The plant was used as an emergency factory for airframe repairs and for producing such varied items as JU88s, mines, heating stoves, hand grenades and, towards the end of the war, for assembling V1 flying bombs.

The first recorded bombing of the factory occurred in the summer of 1943, but no damage was sustained. As the factory was selected at the end of the war for examination by the United States Strategic Bombing Survey team, accurate records are available of the four major raids on the plant, which we have reproduced in full. Two other incidents occurred. The first of these, on April 18, 1944, when a single unknown aircraft dropped incendiary bombs, destroyed part of the front of the building. Then on April 29 at 11.19 in the morning, a US Eighth Air Force aircraft believed to be a Fortress returning from a raid on Berlin was hit by anti-aircraft fire. An engine was set on fire and the crew baled out, but the unpiloted bomber flew on to the factory where, after circling, it crashed into the corner of Hall 1.

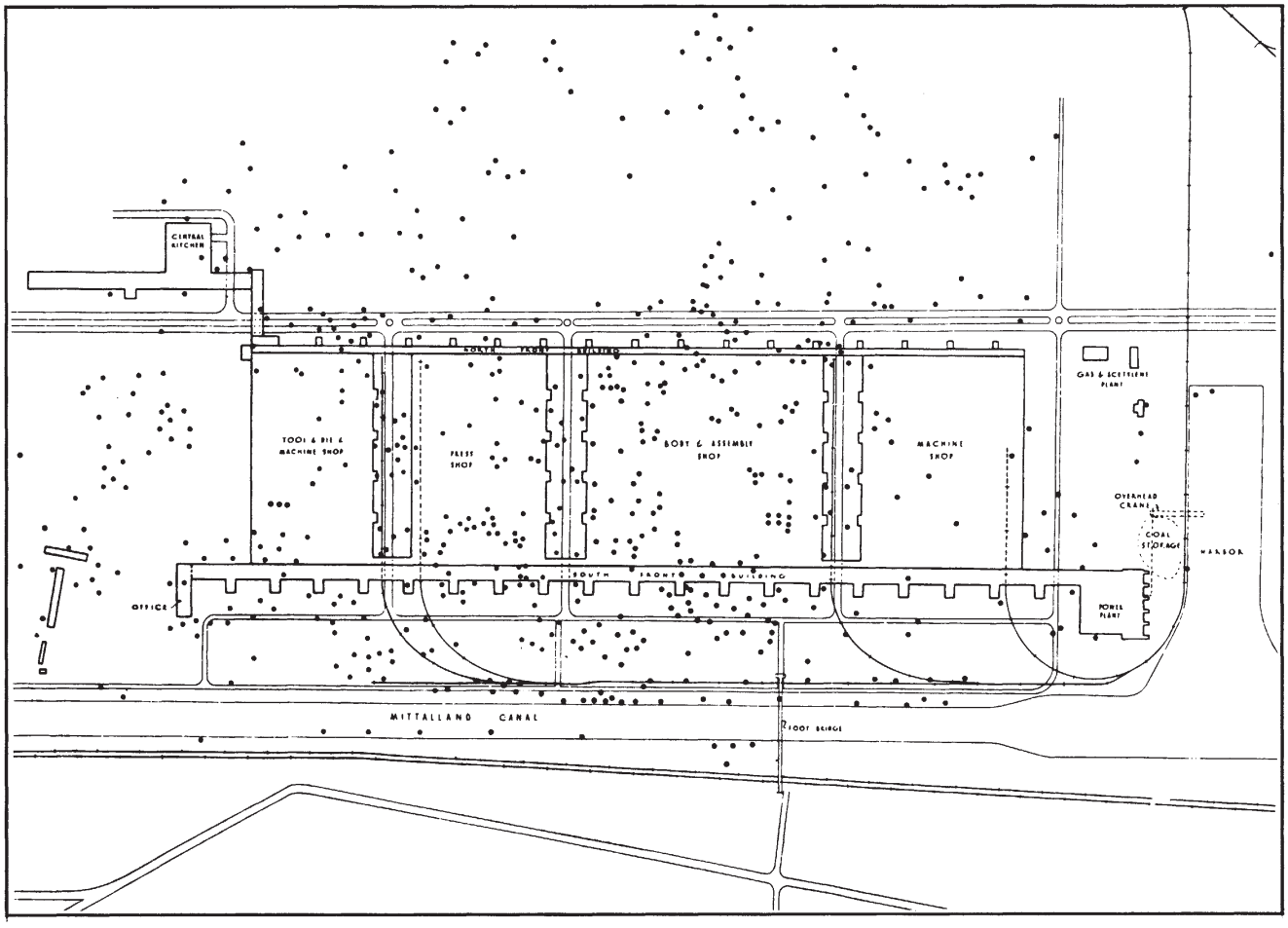
**Above: This is where the foundation stone was laid and the May 1938 ceremony took place. When the new administration building was erected in 1959, the stone was removed and broken up. Below: The first of the many VW-type 'roll off' photographs — this one for the 1000th KdF vehicle — a Kubelwagen.**

## US EIGHTH AIR FORCE ATTACKS ON THE VOLKSWAGEN FACTORY IN 1944

| Date & Time of Attack | Number & Type of Aircraft | Bombs Dropped | | | | Height Dropped in Feet | Number of Hits Approx. | Un-Ex. Bombs | Wounded | Killed |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Type | Number | Size lbs. | Tons | | | | | |
| April 8, 1944<br>1415-1419 | 56 | High Explosive<br>M-47 100lb Petrol | 251<br>1651 | 500<br>100 | 63<br>83 | 19,700-<br>21,000 | 950 | None<br>Reported | 40 | 13 |
| June 20, 1944<br>0904-0909 | 137 B-17 | High Explosive<br>,,<br>M-17 110 lb. x 4 lb.<br>Magnesium | 130<br>372<br><br>330 | 2000<br>500<br><br>500 | 130<br>93<br><br>83 | 24,000-<br>26,000 | 582 | 32 | 93 | 27 |
| June 29, 1944<br>0939 | 41 | High Explosive<br>Incendiary | 306<br>520 | 500<br>100 | 77<br>18 | | 350 | 28 | None | 8 |
| August 5, 1944<br>1336-1337 | 85 B-24 | High Explosive | 548 | 1000 | 274 | 22,000-<br>23,500 | 300 | 24 | 27 | 7 |

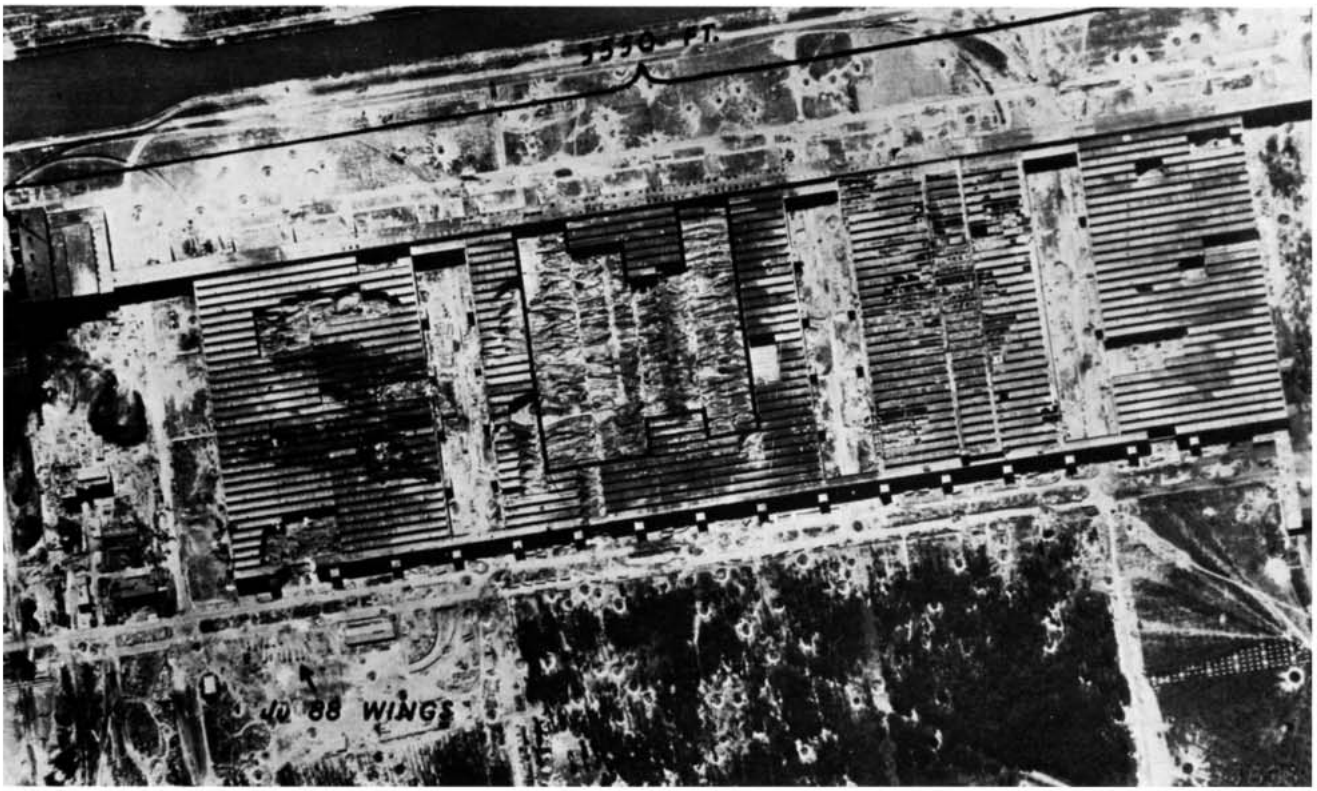



**Above: A model of the factory on display in the VW museum showing the bomb damage to the buildings. Hall 1, where the B-17 crashed, is arrowed. Below: The Master bomb plot produced for the US Strategic Bombing Survey of the factory at the end of the war.**



Above: August 5, 1944 — the raid begins. The 93rd Bomb Group equipped with B-24s based at Hardwick, Norfolk attacked the factory from high level.

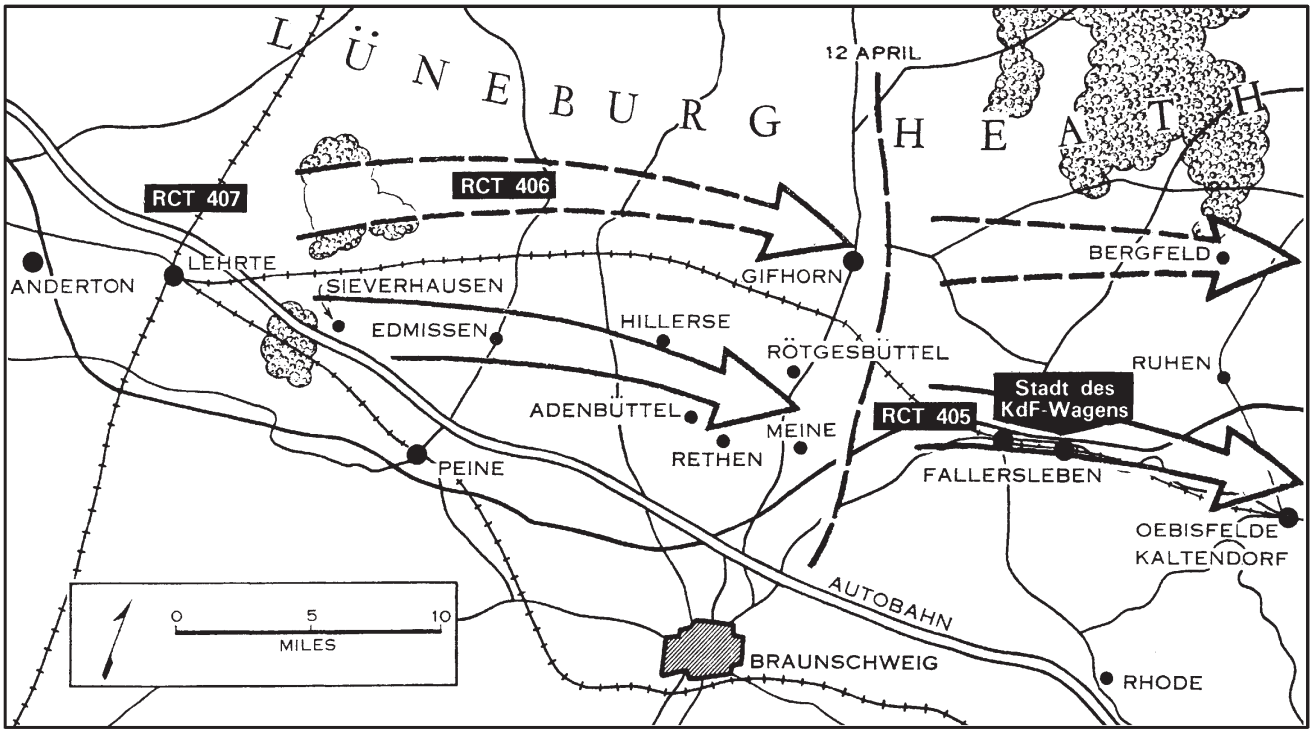
Below: Sticks of bombs spread across the factory whilst the Germans attempt to screen it with smoke. The group claimed 300 hits from 1000lb bombs out of the 548 dropped (USAF).




By May 1945, fifty-eight per cent of the factory lay in ruins and as the war came to an end, orders were given to evacuate the remaining undamaged machinery to the west away from the advancing Russians. Two hundred machines were shipped to mine shafts at Longwy, other equipment being scattered throughout the surrounding countryside.

An advance unit of the 405th Regimental Combat Team of the US 102nd Infantry Division reached Fallersleben, four miles from the factory, on April 10, but the Americans did not come to KdF Stadt as it was not marked on their maps. The SS guarding the forced labourers fled, leaving the prisoners unguarded. Overnight they broke free of their camp and, after looting the few executives' houses south of the canal, turned their attentions to the factory. Telephones were ripped out, files overturned and burned and typewriters smashed. Others 'captured' freight trains at the railway station and the exhilarated looters soon threatened to burn the town.

**Top: This reconnaissance photograph taken after the raid clearly shows the burnt-out areas (USAF). Centre: A German photograph taken at the factory during an Allied air-attack, date unknown. Left: Soldiers and civilians watch a barracks burn after one of the 1944 raids. Above: Completely changed, this is the site of the barracks as it appears today.**




The next morning the German Army Chaplain, Pastor Holling, accompanied by a French priest from the camp who spoke English, drove to Fallersleben to plead with the Americans to take the town to stop further violence. They found the US occupation army consisted of a Lieutenant and eleven men. When the Lieutenant was told that the thirty American children of the German-American engineers recruited before the war were in danger, he lost no time.

When the priests returned they were preceded by an armoured car and a jeep. The children were found safe, but at the hutted camps the intoxicated looters seemed to have lost their senses. Three bursts into the air did not succeed in serving its purpose as a warning; two further bursts along the road, leaving several bodies lying motionless, soon restored sanity. The following morning two hundred US troops with Sherman tanks occupied the factory and town.

On May 25, 1945, the name of KdF Stadt was changed by the town officials to Wolfsburg, after the nearby castle. The Americans were persuaded to keep the factory power station operative, as it supplied (as it still does) electricity for the townspeople, and Rudolf Brormann, the factory's former chief inspector, was put in temporary charge.

Although captured by the Americans, Wolfsburg and nearby Fallersleben came within the British zone of occupation. On May 26, the British 52nd Division started assuming responsibility for the area occupied by the US 406th RCT and a few days later the changeover was completed. Repatriation was begun for the foreign workers, although no arrangements existed for the return of the Russians and other East Europeans. The British soldiers guarding the camp frequently had to break up disturbances amongst these displaced persons.

When the first British Army detachments arrived at Wolfsburg they surveyed the factory and found the power station working at low pressure but with no activity at the plant itself. Sentries were posted to ensure no further

**Right: US Army engineers occupied the factory after its capture on April 11, 1945. The factory had made flying-bombs, aircraft wings and Teller mines as well as assembling vehicles. Here, engineers inspect the ruins for usable materials.**

Top: Production at the factory had come to a complete halt by 1945. Left: This is the area between Halls 1 and 2; the picture makes a striking contrast to the same section of the factory, photographed during our visit, photo above.

Left: Combat engineers of the US Army salvage steel to be used in bridge building for the Allied armies (USAF). Above: A few Kubelwagen body-shells remained in a corner of Hall 3.

looting took place and the unit's vehicles were garaged at the factory. Some workless ex-employees and engineers returning to the factory to collect belongings offered to service and maintain the unit's vehicles. The officer in charge, faced with sending vehicles over fifty miles to the nearest workshop unit, agreed, and a section of the less damaged part of the building was cleared to install some suitable equipment and machinery from other parts of the plant. Soon there were almost a hundred men keeping themselves occupied with this work. There was no financial reward other than the midday meal provided by the unit.

Thereafter word spread to other British units about local servicing facilities and what had been intended as a makeshift arrangement became a workshop establishment. By July, British Forces HQ learnt of the facilities and skilled personnel available at Wolfsburg and posted a detachment from 30 Workshop Control Unit of the Royal Electrical and Mechanical Engineers to the plant.

Designated 3/1/Provincial Heavy Workshops, it consisted of Captains Gerrard and Murdoch and three other ranks. They had the task of organising a workshop for the repair of captured enemy vehicles.

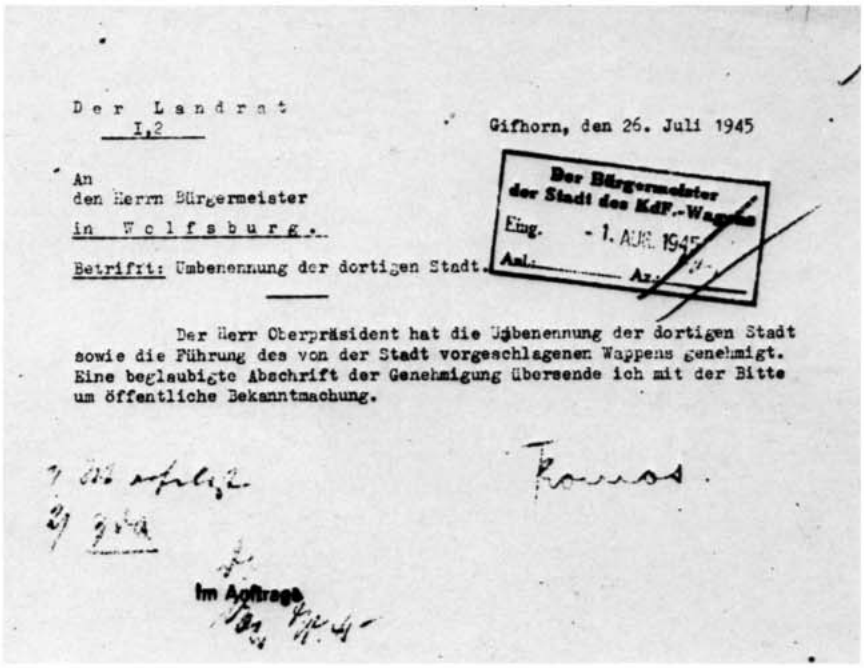
In August another section of the factory was set aside for engine repairs. At first only Jeep but later other types of engine were overhauled. An RAOC Stores Section of nine joined the detachment in September under Captain May. The REME strength of 3/1/PHW was increased to six that autumn and the unit re-designated No. 2 REME Auxiliary Workshops in October.

With a view to meeting occupation requirements, the British Military Government thought that the main part of the Volkswagen factory could perhaps be re-opened for car production, and Major Ivan Hirst of REME was assigned to the factory in August 1945 to see what could be done. With REME assistance machinery was re-concentrated at Wolfsburg and the German staff replanned the factory layout in order to achieve a limited production of cars in the least damaged buildings. By the end of August Kubelwagens were being assembled again from parts left over from wartime production.

In September one of the pre-war Volkswagen saloons was sprayed khaki green and driven to HQ 21 Army Group as a demonstration model. The resulting order for the first batch of saloons was taken as the signal to go ahead. During that month Property Control arranged for a £250,000 overdraft with the Deutsche Bank in Brunswick. Being under the authority of the Control Commission Finance Division, they had no choice but to agree! By the end of 1945 fifty-eight new vehicles had been produced.

Manufacturing, as distinct from mere assembly, was planned for 1946. As the remaining German management was very weak, Hirst appealed to his chief, Colonel C. R. Radclyffe, at the Zonal Headquarters of the Control Commission (British Element), for re-inforcements on the British side. Wing-Commander R. M. Berryman, a retired RAF officer who had been in the motor trade, was appointed as his production officer to liaise with and back up the German executives within the factory, and Major A. McInnes arrived as resident Property Control Officer with responsibilities extending beyond financial matters.

It was clear to all at Wolfsburg—British and Germans alike—that other Allied countries, especially the Russians, were clamouring for serviceable machinery as reparations. In accordance with the Allied policy of dismantling a proportion of German industry for reparations the Volkswagenwerk, being the property of the Nazi Party, was high on the list. Colonel Radclyffe stated that there would have to be practical proof that Volkswagenwerk was still an essential



Der Landrat
I,2

Gifhorn, den 26. Juli 1945

An
den Herrn Bürgermeister
in Wolfsburg.

Der Bürgermeister der Stadt des KdF.-Wagens
Eing. - 1. AUG. 1945
Anl.: Az.:

Betrifft: Umbenennung der dortigen Stadt.

Der Herr Oberpräsident hat die Umbenennung der dortigen Stadt sowie die Führung des von der Stadt vorgeschlagenen Wappens genehmigt. Eine beglaubigte Abschrift der Genehmigung übersende ich mit der Bitte um öffentliche Bekanntmachung.

Im Auftrage

**Top: The certificate changing the name of the town from Stadt des KdF-Wagens to Wolfsburg. Above: October, 1945 — under new management as No. 2 REME Auxiliary Workshops. This picture was taken on the old approach road to the factory, now demolished, which ran beside the modern railway bridge, photo below.**

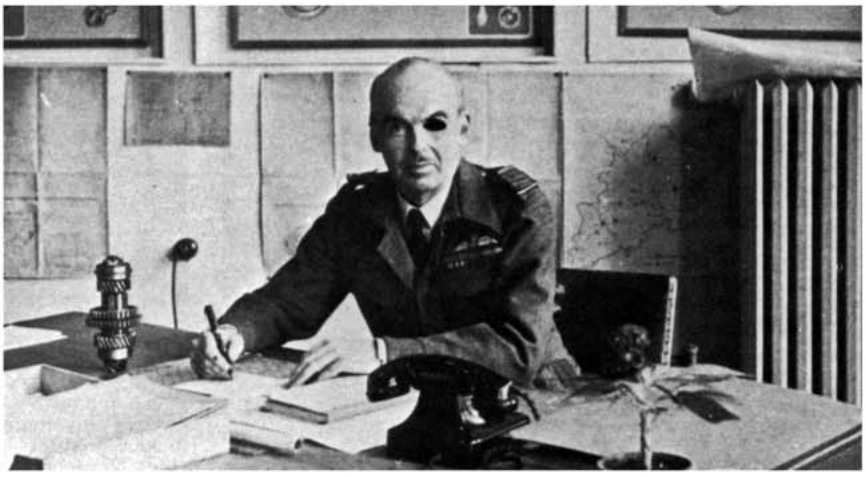
**Left: Temporary engine assembly was carried out in the cellars during 1945-46. Above: Major Ivan Hirst led the British team responsible for laying the foundations for the successful post-war Volkswagen company.**

and productive factory, otherwise it would certainly be demolished. Proof for this would be the production of a thousand new cars a month—by the end of March. A Russian unit of two officers and thirty men in Wolfsburg for the repatriation of USSR nationals was a constant reminder of the urgency!

Wing Commander Berryman put the position to the key German employees through one of the original ex-US employees named Fietz, manager of the press shop. The German workers agreed to try, providing adequate food and blankets could be found. By every effort, including the 'diversion' of a train-load of coal on its way to Berlin to keep the power station going, and the re-activation by Military Government of suppliers' factories elsewhere, the target was achieved—1003 vehicles had been produced by April 1. A signal was sent to Colonel Radclyffe 'Target achieved'. Some of these cars were collected by the Red Army during March, marking the first 'exports'.

With the future of the factory looking more hopeful, 9,871 vehicles were produced by the end of 1946. During that year all German factory workers were screened by the de-Nazification Courts and those politically objectionable were discharged, including Brormann, the plant manager. His functions passed to Dr. Munch, the custodian of the property.

The severe winter of 1946/47 brought production to a complete halt at the end of January, due to lack of coal for the power station. Production did not start again until March. No sooner had it done so when, in April, the paint shop was burnt down. Until a new one could be built cars had to be sprayed in the open. In spite of these setbacks 8,939 vehicles had been produced by the end of 1947.



**Centre: Major McInnes with his secretary Miss Phillips, and right: Wing Commander Berryman.**

In February, 1948, the workshops under REME began building 110 ambulances from Kubelwagens and Beetles that had been scrapped. Stretchers and other special fittings were made by outside firms and the programme was completed by June. By August that year when it was closed, the engine repair shop had overhauled 15,000 engines of all types for the British Army. This work was then transferred to 23 Heavy Workshops, REME.

Although the efforts in production during March 1946 had assured the future of the factory as a whole, its eventual disposal had not been decided.

An early Volkswagen had been sent to England for evaluation, and the report concluded that 'to build the car commercially would be a completely uneconomic enterprise' and that if the Germans produced it 'it would mean no undue economic competition on the world market against British products'. Lord Rootes (then Sir William) visited the factory; his opinion was typical—the car and the plant were of no interest, even as a free gift.

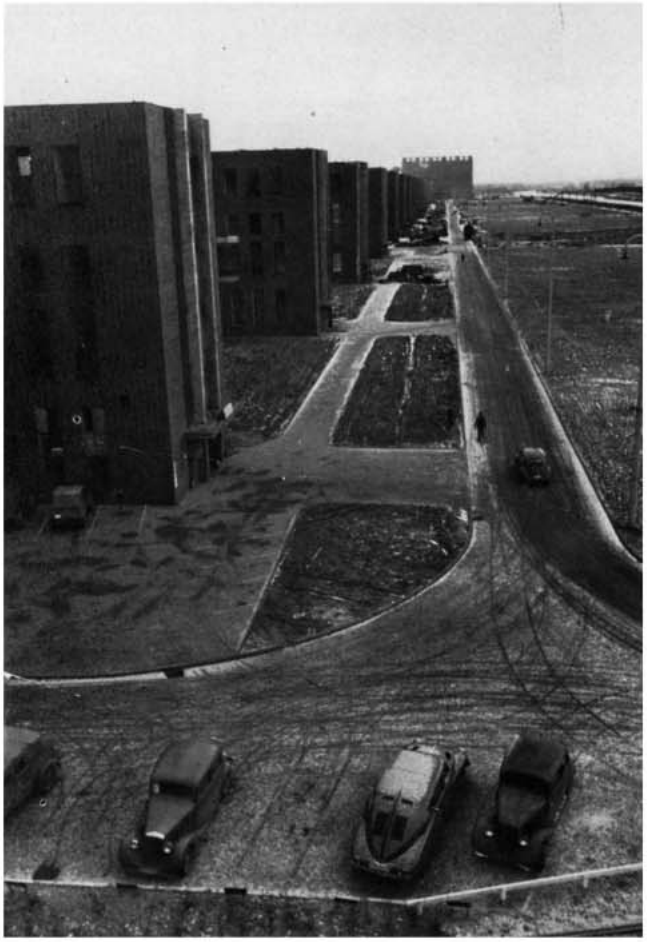
The Australians sent a team to the factory in February 1947 but decided not to bid for it as reparations, and later in March, 1948, at a meeting in Cologne with Ford of America, the British Military Government made one final attempt to give the factory away. With Henry Ford II at the meeting was chairman of the board of the Ford Motor Company, Ernest Breech. When Henry Ford asked the latter for his opinion, Breech said 'Mr. Ford, I don't think what we are being offered here is worth a damn'.

Later in 1948, however, the Russians expressed a 'willingness' to take the Volkswagenwerk off the hands of the British authorities. Relations with the Soviets had already cooled drastically and the Berlin blockade had begun in June. Despite this, the Russians suggested a convenient plan for their take-over of the factory. Since Wolfsburg lay just five miles west of the Soviet Zone, the Russians suggested that the border be shifted a little to place both the town and the factory inside East Germany!

**Above: Colonel Radclyffe had set Major Hirst a target to prove the factory was worth saving — 1000 cars per month by the end of March, 1946. Here is the proof with Major Hirst at the wheel.**

However, the appointment of Heinz Nordhoff by the British Board, of which Radclyffe was the chairman, on January 2, 1948 to replace Dr. Munch as general manager of Volkswagenwerk, began the chain of events leading to the eventual handing over of the plant to the German Government.

Nordhoff on his appointment asked for a completely free hand. The 'Wolfsburg Motor Works' sign was replaced with one reading 'Volkswagenwerk' and a parking notice 'Officers Only' was removed by the British as an indication of goodwill. This set the pace for Nordhoff's plans for the factory. The early post-war phase of direct Military Government intervention in the absence of stable management, which was marked by outstanding British-German co-operation, was drawing to an end. Henceforth management was to be purely a German matter, with Herr Nordhoff



**Left: A picture taken from the old administration building in the winter of 1945/6. The open land on the right was ploughed and sown with rape, a crop which grows even in winter. The Tatra, which had been found at the factory, was used by Major Hirst on Military Government 'trade plates'. Above: A comparison taken in 1950 illustrating the prosperous growth of the company under Heinz Nordhoff.**

reporting to the Control Commission's Board for the Volkswagenwerk Organisation. The British gradually withdrew into the background, though Major Hirst continued as the executive member of the Board resident at the Wolfsburg factory until the autumn of 1949.

An important milestone in the recovery of the factory was the German currency reform on June 20, 1948. Overnight 170,000 million Reichmarks shrivelled to 10,000 million new Deutschemarks. Restrictions on industry were lifted and Nordhoff outlined his expansion plans for overseas sales.

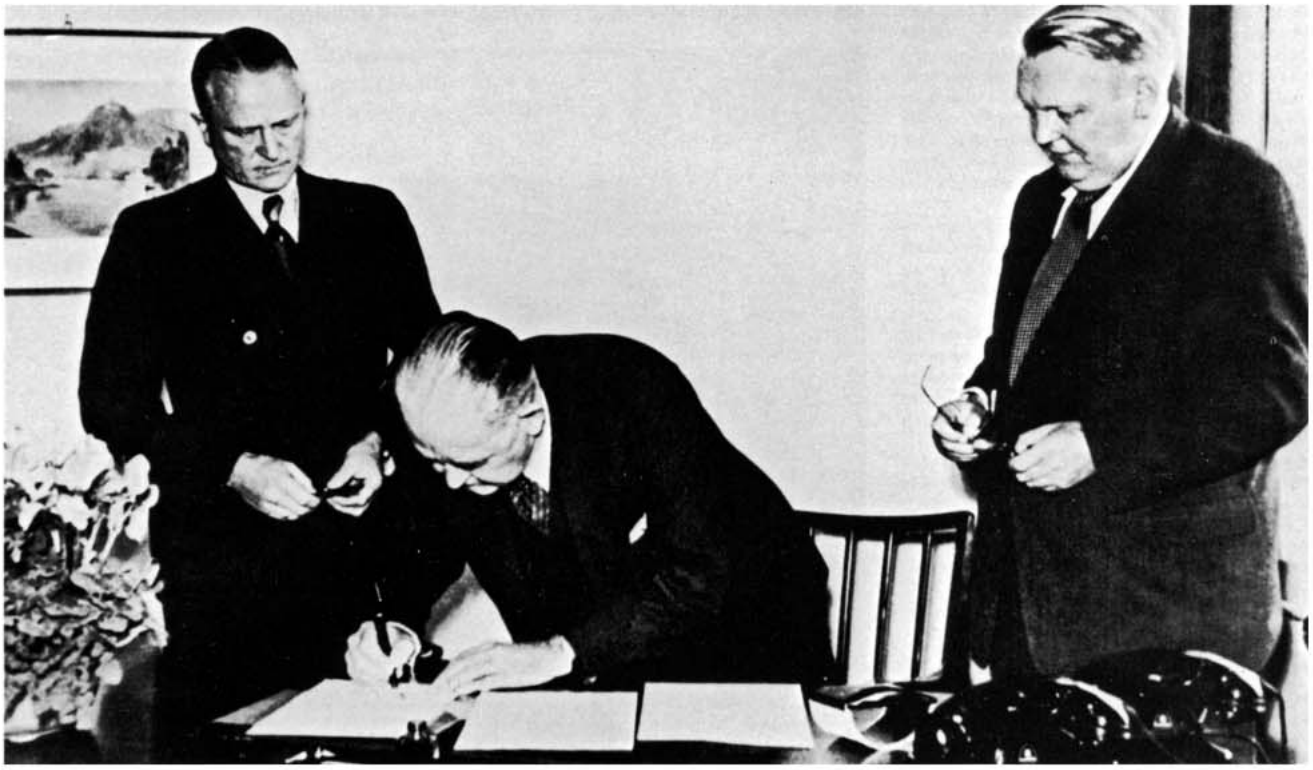
As money trickled in, the factory was repaired and enlarged. Three million square feet of plant and offices were rebuilt and the production line system, originally intended for the factory in 1938, finally laid out. This released a further 400,000 square feet of factory space. Export sales had already begun in 1947, and by November 1948 there was a waiting list of 15,000 for Volkswagens for Germany and 7,000 for export. Production rose to 19,244 vehicles in 1948 and by May 1949 the 50,000th post-war VW had been produced.

Today these figures may seem low, but they were truly remarkable for the 1946-48 period when production from all the other car makers in Germany was negligible.

Throughout the initial phase the British team laid strong emphasis on the need for good after-sales service—REME had suffered greatly from the shortage of spares during the war! In fact, Hirst went so far as to 'block' the first export shipment of Beetles until the foreign concessionaires placed their order for spare parts and special tools for delivery at the same time as the cars. The Company's reputation today owes much to those early efforts.

On October 8, 1949, the British Occupation Authorities handed the plant over to the Bundesregierung Deutschland, the Federal German Government—Colonel Radclyffe signing for the British, and Dr. Ludwig Erhard, Economics Minister, signing for Germany. The company, already a viable enterprise, was to be administered by a trusteeship in which the Federal Government, the province of Lower Saxony and the employees of the plant were represented. Dr. Nordhoff was confirmed in his post as managing director. On May 9, 1960 the final ownership of the factory was settled, almost fifteen years to the day the war ended. The company was transformed into a shareholder-owned corporation, 20% being owned by the Federal Government, 20% by the provincial government and 60% by the general public. The 3,600,000 shares were placed on the market

**Below: Colonel Radclyffe signs the company over to the German government in 1950 watched by Herr Nordhoff, left, and Dr. Ludwig Erhard.**



on June 30. Over 1½ million people oversubscribed by 84 per cent for the company, then worth 600 million Deutschemarks. Volkswagen was well and truly on the map, but as the post-war architect of the VW miracle, Dr. Nordhoff, recorded, 'by one of the ironic jokes history is sometimes tempted to produce, it was the Occupation Powers who, after unconditional surrender, brought Hitler's dream into reality'.

*It will not be necessary for the editor to repeat statistics as to the present position of the Volkswagen in the world league table of car production. To all our readers in whatever country, the Volkswagen will be a familiar sight and many will probably be owners.*

*When we visited the factory at Wolfsburg, it bore little resemblance to the immediate post-war scenes of destruction. In fact even with the help of Dr. Wiersch, the company historian, it was impossible to match up many photographs. The office block used by Major Hirst and his team in the immediate post-war years was demolished in 1959 to make way for a new fourteen-storey administration building and this precluded us from matching many office photographs.*

**Left: January 16, 1960, the first meeting of public shareholders held at the factory.**

**Above left: Prototype No. 3 of the original KdF-Wagens in the company museum in its original gloss black, purchased after the war in Hamburg with 400,000 km on the clock! Above: A nicely preserved Schwimmwagen with a Kubelwagen in the background.**

*During the construction of this building, the foundation stone bearing the swastika was demolished and all trace of the site (which was on open ground between the entrance and the factory) obliterated. However, Dr. Wiersch was persuaded to show us the site which could easily be recognised by the fir trees visible in the 1938 photographs. He then produced from an inner office the brass box complete with eagle and swastika decoration which was set in the stone and which had been removed before its destruction.*

*Naturally Hall 1, where the US Fortress crashed, has been completely repaired, and Dr. Wiersh was proud to tell us that no trace of wartime damage could be seen at the factory today.*

*We made extensive enquiries both in this country, Germany (where we traced the head of the factory air raid system at a rifle range on the edge of Wolfsburg) and in the USA, to trace the identity of the Fortress which crashed on the factory in 1944. Over 600 bombers were despatched to Berlin that day and, of the 46 which failed to return, it seems impossible to trace the air crew concerned.*

*The small VW Museum contains an original Kubelwagen (1944 manufacture with welded wings) and a Schwimmwagen in original paint finish. They also have No. 31 of the Type 38 convertible saloon which belonged to Dr. Robert Ley of the KdF organisation, and have bought back Prototype No. 3 of the 92 VW saloons produced before the war. It is resplendent in its authentic gloss black and has 400,000km on the clock. Mounted on the wall behind the cars is a huge relief map of the factory in 1945 showing the bomb damage and craters which our readers can compare with the US Strategic Bombing Report plot reproduced on page five.*

*The fate of the KdF savers is interesting. An organisation, to press for return of the savings of those who paid in before the war, was formed on October 7, 1948. After countless legal battles the matter was resolved in October 1961 when the German Supreme Court hammered out a solution. Savers who had completed their payments could receive either 600DM (then approximately £52) credit towards a new VW or 100DM (£8.40) in cash. It was a generous settlement as with the currency reform, 600DM is equal to 6,000RM (the exchange rate being 10:1 in 1948). Only those people who could produce the original card were paid; about 60 per cent of the original 300,000 savers made claims of which half took the credit on a new car. Dr. Wiersch told us they would still honour a card if produced today. The original money received before the war started was deposited by the KdF Organisation in the Bank of Deutsche Arbeit in Berlin. It was captured intact by the Russians and the 280,000,000 marks seized.*

*Both Colonel Radclyffe and Wing Commander Berryman are now dead. Major McInnes, a business executive until recently, is now a minister in the Church of Scotland, and Ivan Hirst is now with the OECD in Paris.*

**Above: Twenty-five years after the war ended, Major Hirst, seen here with Direktor Hoehne, revisits the Volkswagen works to claim the 14 millionth 'Beetle' for the United Kingdom. Below: Heinz Nordhoff died on April 12, 1968. On April 18, in typical VW-style, he left the factory for the last time on the back of a specially converted pick-up truck!**

# Lieutenant-Commander Peter Scott CBE, MBE, DSC

Sir Peter Scott, CBE, MBE, DSC, the son of the British explorer-hero Robert Falcon Scott who died in his attempt to reach the South Pole in 1912, is perhaps best known today for his work as Chairman of the World Wildlife Fund. However, his unique work as a naturalist, writer, painter, yacht racing and gliding champion is equalled by his career during the Second World War in which, as a Naval Officer, he managed to serve not only at sea, but on land and in the air.

In his biography of five hundred-odd pages, nearly half are devoted to a full and exciting six-year career in the Royal Navy which resulted in three 'mentions in despatches', and his being awarded the MBE and Distinguished Service Cross.

At the beginning of 1939, he was already enrolled in the Royal Naval Volunteer Supplementary Reserve by virtue of his yachting experience. When he wrote to the Admiralty to promote his early call-up, he was told that 'he should on no account communicate with them again . . . that he was not wanted then . . . and it was even quite possible that he would never be wanted'. The following week he was called up!

His first posting was as a Temporary Acting Sub-Lieutenant at *HMS King Alfred,* a shore-based basic training centre at Hove. Parades, P.T., lectures in navigation, Morse and allied subjects prepared the four hundred-odd recruits for life at sea. After completing a Destroyer Course, he was sent to *HMS Osprey,* another shore-based 'frigate' at Portland, for anti-submarine training. Finally as a Lieutenant (still in the RNVR), he was ordered to join *HMS Broke,* a destroyer, at Devonport.

He sailed on his first convoy escort duty at the beginning of March 1940—one enemy he had not bargained for was sea-sickness, leading to jaundice, which kept him ashore for the following month. He admits that he never completely mastered sea-sickness, from which he suffered for the first thirty-six hours of each new voyage.

Although back at sea in April, it was not until June, after the fall of Dunkirk with British troops still fighting in France falling back on Normandy, that he entered the war in earnest.

It was on June 9 that *HMS Broke* was ordered to France at top speed. The following morning, the destroyer crept cautiously into the harbour at Le Havre to find the quays deserted. Later that day, after successfully surviving a German dive-bombing attack, the ship was ordered to evacuate wounded survivors of the 51st Highland Division from St. Valery-en-Caux which was, by then, many miles behind German lines. The operation was timed for midnight:

'I had about a quarter of an hour in which to get ready, while the ship eased in towards the coast. I strapped on a pistol and with binoculars round my neck all was in readiness. Just then up went a green Very Light, the signal that it was safe to close the shore. I did not want to go close under the cliffs before reaching the harbour as they might well be in enemy hands and any approaching motor-boat might have been machine-gunned. At last I made out the end of a pier and we approached it as slowly as the engine would run. We could see no sign of life whatever on either pier. Meanwhile there had been intermittent dull explosions which I took to be mortar fire.

'Ahead was a drawbridge and I decided not to go under it, but to land in the outer harbour. There were no sentries at the bridge. Over to the left of the bridge I suddenly heard the sound of a motor-cycle engine. Some mechanised unit was passing through the village, and I felt fairly sure it would be an enemy one. I decided to go ashore at once and find out. I drew my revolver and ran across to the houses opposite, then keeping close to the wall I went towards the corner. Just before I reached it I saw the legs of a sitting sentry showing round it. So brandishing my pistol without much conviction I popped round the corner and said "Hands up". He jumped up and said, "Yes, sir, certainly, sir," and I said "Thank God, I thought you were a Jerry".

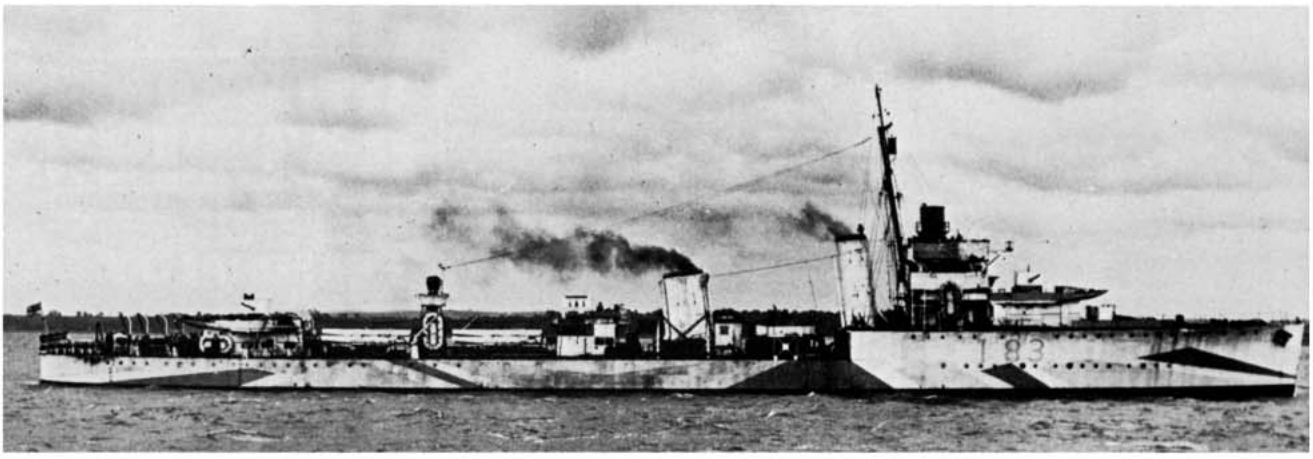
'My five minutes being up, I ran back to tell my crew that the village was held by the British . . . After walking about half a mile, we came to a small square on the sea front and a man walking up and down on the promenade, who turned out to be an officer in charge of the wounded. I could not resist the phrase made famous by the *Cossack* when rescuing the prisoners from the *Altmark.* "The Navy's here!" I said. We walked quickly over to the house where the wounded were hidden. A doctor came out and quickly told me that he had forty-seven stretcher cases and about sixty walking cases. It was already well after three a.m. and dawn was breaking. I said we had about three-quarters of an hour in which to embark them. From the sea front I got the signalman to call up *Broke* with our little shaded lamp.

'There was talk of getting ambulances to transport the wounded the 500 or 600 yards to the quay, but this was impossible, as the ambulances had gone. Already some of the walking wounded were arriving here, then we moved the stretcher cases out to the end of the pier as quickly as possible. I had never realised what hard work it was carrying one end of a loaded stretcher. My Coxswain and I carried the first one.

'I left instructions with an officer to proceed as best he could with the embarkation, lowering the stretchers with ropes; then I went back to hurry on the work of moving the stretchers.

'By this time it was quite light and my chief anxiety was for the ships outside. All through the dawn there had been this terrible urgency to get the wounded men away without risking the ships in a stationary cluster outside the harbour. Two or three more destroyers and other ships had joined *Broke,* and at any moment I expected to see the dive bombers attacking them.

'Then I began to embark stretcher cases in the M.L.C. alongside the camber. The warships were still lying off and I was in an agony of apprehension, as their safety seemed to depend on the speed of my operation. Some of the British wounded were in pitiful case. Quite a number of the walking ones were shell-shocked—quite dazed and unable to



**Peter Scott's camouflage scheme is clearly indicated in this view of HMS Broke, a 1,480-ton destroyer built in 1920. She was lost on November 8, 1942 forcing the boom at Algiers during the North African landings (IWM).**

understand what was going on. One wounded man could just walk. He came hobbling along, thinking he would miss the boat. Others smiled up from stretchers. At four-forty a.m. I pushed the last cutter off the camber and jumped in.

'It was ten past five when I returned on board and went straight up to the bridge to report to the Captain that all wounded had been evacuated. I had left the ship just four hours before, and it was just over two and a half hours since I had landed. One hundred and twenty people had been evacuated, ninety-five of them wounded.'

On June 12, St Valery fell to General Rommel; on June 17, *HMS Broke* was ordered to sail for Brest to evacuate further remnants of the British Expeditionary Force. When they arrived, Lieutenant Scott was again in the forefront of the party to go ashore. This time the operations were to include demolitions as well:

'It was a beautiful day with a fresh wind, blue sky and green water. French soldiers waved to us from the batteries on the south side as we passed through the narrows and came in sight of the inner harbour. Just as we arrived at the breakwater a tremendous explosion occurred a few hundred yards on our port bow.

'A few seconds later a barrage went up to the northward and we spotted three aircraft. *Richelieu* was firing and we joined in. Two of the planes remained very high, but one dived down suddenly.

'Thus in the din of battle we entered the inner basin of the Port du Commerce and secured alongside the quay. To our left was the Naval Basin, to the right more quays of the Port du Commerce, and beyond them some oil tanks which we had pointed out to the demolition party as we arrived.

'One of the Canadian subs went foraging and returned with a lorry in good working condition. Two more lorries were found, and these were invaluable for transporting the demolition charges.

'Eventually I began to organise a party to collect Bren guns. There was a great air of hurry and bustle on the quay with the demolition party fitting charges and loading them into the lorries. We were still pitifully ill-equipped for replying to air attack. If we could only get together a few machine-guns we should be able to do *something*. So we set off up the hill past rows of abandoned and wrecked lorries. At the top was a vast car park with hundreds more in rows filling the whole square. All these vehicles were British. They belonged to the soldiers who had brought them a few days before and had now been evacuated, leaving all their gear behind them.

'There were two ways of getting any guns from the lorries should we find any (and my petty officers very soon did). One was to ignore the French sentries and risk trouble, the other was to get leave. The second seemed the best thing to do first and I was finally directed to the castle which was on the far side of the square . . .

'The Colonel was most helpful. There were six Brens already in a lorry, and a great deal of ammunition, and as soon as he had gone I instructed that a few extra guns should be loaded into the lorry. On the hill we passed a party of BEF with a lorry and some anti-tank rifles, and we told them to follow us down to the quay.

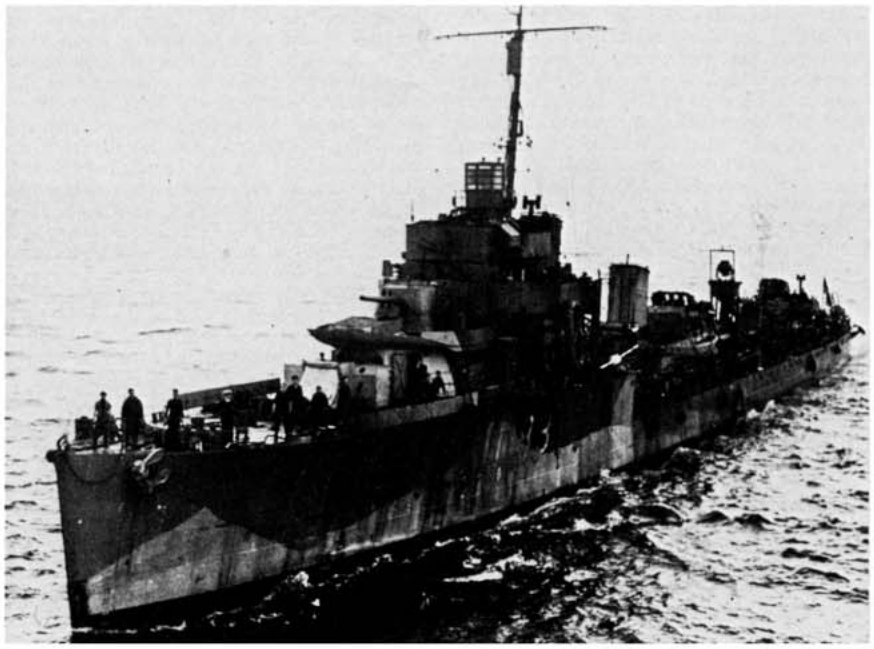
'We loaded the machine-guns and ammunition aboard. Sub-Lieutenant Mason returned with a lorry-load of three-pounder ammunition. It was useless to us but we embarked it. Then Mason and I took over one of the lorries and formed a party for another Bren gun search.

At the top of the hill we found a better lorry and changed into it. PO Baxter drove it—very fast. I found myself travelling on the running-board, for no good reason except that it seemed vaguely more flexible, but probably because it was what people did in the movies. Over the hill we came down again into the square full of lorries. I said we had sent back the lorry we had originally taken and that we were now looking to see if there were any more spare guns. But we only found two Lewis guns and some tracer ammunition.

'By now people were running down the road leading into the square. At any moment we expected to see enemy motor-cycles or tanks following them. We bundled the last of the gear into the lorry, and set off. But the panic was only an air-raid after all. The ships were firing away in the harbour as we drove down the hill at breakneck speed. I had to keep reminding Baxter to keep to the right. We hurtled along the quay, only just stopping in time to avoid a collision with another lorry. The First Lieutenant shouted to us to get aboard at once; the ship was leaving. We rushed the gear across from the lorry and leapt after it . . .

'Later, a message came that the Captain wanted to see me at once . . . the Germans were expected in Brest at seven p.m. It was then seven-thirty. "You must try to get a message through to Commander Congreve to start demolition at once." I went ashore again. Only one of the demolition parties was there, guarding some charges for the cranes along our own quay. I had to wait for some of them to return. Meanwhile we carried the charges down the quay and placed them under the cranes.

'At last the lorry came back, and I turned it about and sent it post-haste to start demolishing. I went on taking charges along to the cranes on the quay beyond. Under each arm I carried twenty pounds of wet gun-cotton, with detonator fitted and fuse trailing.



**HMS Broke comes alongside HMS Sheffield to embark US troops for Algiers (IWM).**

I placed the charges beside the outer legs of the crane . . .

'Before leaving, I was accosted by a senior French Naval Officer who asked by whose order the demolitions had been started. "The Admiral," I said airily. "Which admiral?" "Admiral Ouest, of course," I said, this being the title I had heard earlier in the day. Apparently this was the wrong answer. It should have been the Admiral of the Port—or the General of the Port. He was greatly infuriated, for he said the demolitions should not have begun until the morrow. I did not think I could do much to soothe him, beyond saying that I thought the Germans would be here long before the morrow dawned, so I left him fuming and returned to the ship. The whole basin was swathed in smoke from several oil fires that were now burning fiercely . . . As I was climbing up to the bridge some floating cranes in the basin just astern of us were blown up. It was a stirring sight to see them fall. This was like breaking crockery on a titanic scale with a bit of Guy Fawkes thrown in—and correspondingly satisfying. Our destructive instincts were having full rein.'

After the excitement of these trips to France, the *Broke* settled down to regular escort duty. It was at this time that Lieutenant Scott's own ideas on camouflage were put to good effect on the destroyer.

'Shortly afterwards we camouflaged the *Broke* on my scheme. It was designed to make her as pale as possible at night because ships nearly always appear as dark blobs on the horizon against the sky. Only down moon on a very bright night would she look too pale. Otherwise she could hardly be white enough. Accordingly one side was a compromise dazzle scheme. The best dazzle schemes, for deception, deceiving the enemy about the class of ship, the speed and angle of approach or inclination, are those which have contrasting patches indicating edges and surfaces which do not exist. The best contrast is one of tone—that is to say, black and white. But black or very dark tones ruin the night invisibility idea. At night, of course, colour is not visible, therefore provided that the colours are pale and of the same tone, the ship will look pale grey all over no matter what colours are used. At the same time, within the scope of paleness, bright colours juxtaposed may, in bright sunlight, produce the desired dazzle effect suggesting non-existent edges and false planes. The other side of *Broke* was therefore painted in pale pastel shades of blue, green, buffish pink and white.

'The early reports from our sub-divisional mate *Vansittart's* Captain, Lt.-Commander Evershed, were most encouraging. At dawn and dusk too, he reported that the ship was remarkably invisible.'

In late October 1940, the *Broke*, then based at Londonderry, set sail with newly-promoted Number One, First Lieutenant Scott, to go to the aid of the great Canadian Pacific liner *Empress of Britain* after she was attacked by a Focke-Wulf Condor, set on fire, and abandoned in mid-Atlantic.

Early on October 27, the liner was boarded and taken in tow by two tugs escorted by *Broke* and the destroyer *Sardonyx*. The fire had subsided and the tow was proceeding successfully at five knots when, at 1.44 a.m. the following morning, Scott was awakened by two underwater explosions—in the inky-black rainswept night a U-boat had managed to send the hulk to the bottom.

Then on April 6, 1941 the *Broke* went to the assistance of the Armed Merchant Cruiser *HMS Comorin* which had accidentally caught fire 600 miles out in the Atlantic. Scott describes the scene when the *Broke* arrived:

'Various objects were falling from time to time from the *Comorin* into the sea. Each time one looked carefully to see if it was a man but it was not. Some of the things may have been oil drums, in an attempt to make the sea's surface calmer. We looked at the weather side first and passed between *Lincoln* and *Comorin*, only discovering that they were connected by line after we were through. But the line did not part, it had sunk deep enough for us to cross. We turned and tried to lay some oil between the two ships. This meant that we nearly got sandwiched. There were two raft loads going across at the time and the sailors in them waved us to go back. They seemed incredibly tiny and ant-like in their rafts on those angry slopes of grey sea.'

**Lieutenant-Commander Scott on the bridge of SGB6, later Grey Shark (IWM).**

With fifty-to-sixty-foot waves, rescue seemed impossible. As darkness descended, the *Comorin's* Captain signalled that he thought the only chance was for the *Broke* to go alongside and let the men jump.

'So we closed the starboard (leeward) quarter of the *Comorin* and in a few minutes we had scraped alongside.

'The absolutely bewildering thing was the relative speed that the ships passed each other in a vertical direction. The men waiting on the after promenade deck were forty feet above our fo'c'sle at one moment and at the next they were ten feet below. As they passed our fo'c'sle they had to jump as if jumping from an express lift.

'The first chance was easy. About nine jumped and landed mostly on the fo'c'sle, some on B gun deck. They were all safe and uninjured. There was little, if any, damage to the ship from this first encounter and we backed away to get into position for the next.

'The second jump was much more difficult than the first. Only about six men came and three of them were injured. From then on I do not remember the chronology of events as one jump followed another with varying pauses for manoeuvring. Our policy was not to remain alongside for any length of time as this would have been very dangerous and might well have damaged us to the point of foundering in these monstrous seas. Instead we quickly withdrew after each brief contact in order to assess the damage and decide upon the seaworthiness of the ship before closing in again for another attempt.

'We decided to rig floodlights to light the fo'c'sle so that the men could judge the height of the jump. The pool of light which they formed gave the whole scene an extraordinary artificiality, as if this were some ghastly film scene.'

The operation was completed forty minutes after midnight. A hundred and eighty survivors had escaped to the *Broke* and, although many suffered injuries when they jumped, only about twenty-five were hospital cases with compound fractures. Other ships had saved another two hundred and thirty men. The successful rescue was acknowledged by the Admiralty in their signal:

'To *Broke*. repeated C-in-C Western Approaches. FOIC Greenock, From Admiralty and First Sea Lord personally: Congratulations on the fine seamanship you displayed in going repeatedly alongside *Comorin* in heavy weather. 0400/10.'

First Lieutenant Scott was mentioned in despatches.

During the summer of 1941, First Lieutenant Scott sprouted wings under the banner of fostering inter-service relationships. With the co-operation of No 15 Squadron RAF, equipped with Stirlings based at Wyton in Huntingdonshire, it was arranged that he should participate in a bomber raid over Germany.

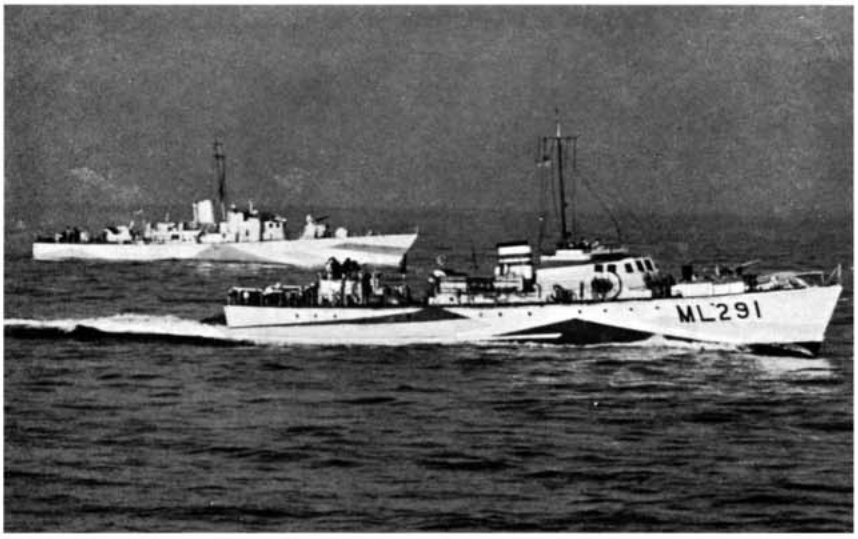
The target for the night of August 19/20, 1941, was Kiel.

'There were eight of us in the plane. Front gunner (standing behind the pilots for the take-off, but later in the very nose of the plane), Captain and Second Pilot. Navigator at a table just behind them, flight engineer at a panel of instruments on the starboard side behind the armoured bulkhead and the wireless operator on the port side of the same compartment. Abaft that was the "bed" with me and the rear gunner, who afterwards went right aft to the tail turret.

'It was almost dark when we took off. I watched the twinkling red and white air beacons and sat by the navigator's table as he marked in the dead reckoning positions on the course line.

'We flew on a course of 065°, always climbing. About three-quarters of an hour later we were at 10,000 feet and started using oxygen. I was still very hot, for the kit was tight and quite stifling at low altitudes. I plugged in my oxygen tube to the connection beside me.

'When we were at about 14,000 feet heavy flak was reported ahead, but all finally agreed that this was a "thunderstorm". Soon afterwards genuine flak was seen on the starboard bow. This was my first view of it from the air. There was thin haze or cloud and the gun flashes were below it. Just above the cloud but far below us were the sparkling pin-points of the shell-bursts. It was rather beautiful. This flak was held to be from ships, but I believed




**Motor Launch 291 and Steam Gunboat No. 8 (later Grey Wolf) during the Dieppe Raid. Lieutenant-Commander Scott was flotilla leader of the SGBs during the landings.**

it to be from Heligoland. A little later, as we crossed the coast of Schleswig Holstein the flak stretched right across in front of us. We altered course because of this, twenty degrees and then forty degrees to port . . .

'By now we were getting pretty near to Kiel and there was very heavy flak and almost continuous flashes from the port bow which I believed to be Kiel.

'The flak was still heaviest on the port side and I thought that we were to the south of our course. By DR (dead reckoning) we had overshot the mark and planned to fly on, seeking a gap in the clouds. If none could be found we should turn back and bomb by DR on the reciprocal course. Below was a white blanket. Ten-tenths cloud obscured the land altogether.

'When we did turn we turned to starboard. As we were, I was convinced, already south of the target, this simply put us further south. I therefore suggested that we should go back to a course beyond the reciprocal so as to work up north towards the heavy flak. This was done and a few minutes later, at midnight exactly, with an unbroken "sea" of white cloud below us, we unloaded our thirteen bombs. There was no noticeable effect on the aircraft.

'Suddenly a searchlight was exposed almost below us. I was looking down on the starboard side and saw a dark patch approaching the glare. This was clearly a gap in the clouds and in a moment the light was in it an we were illuminated. The whole aircraft was brilliantly lit and I expected a heavy fire to be opened on us, or a fighter to attack. But about ten seconds later the beam slipped away from us as we banked steeply to port. We dropped an incendiary bomb with one fin knocked off to make it scream. We had three or four for the purpose of frightening searchlights. I wonder how effective they were . . .

An hour later we were approaching the coast. Suddenly it showed up ahead and a beacon flashing Ds. The Captain asked what was the letter of the day, and then the engines slowed a little. I thought that having sighted the coast we were perhaps losing height so as to save time. The next twenty seconds were a jumble. The slowing down continued and then the weight departed from my feet and we were stalling, falling; "Push the nose down!" said the Captain—"Right down!—What's the matter with the engines? Flight engineer—why have the engines cut?"

'All this time we were in a steep dive—about seventy degrees. The coast, which had been nearly directly below was now a dim line right ahead. The navigator was standing beside me, holding on. I grabbed my parachute just as the Captain said, "Stand by to abandon the aircraft." Then, before anyone could move, the engines began to pick up. He had switched the airscrews to fine pitch to rev them, and the engines had responded. We were coming out of the dive. The crisis was over. We had lost 4,000 feet.'

Then, on August 31, another flight followed to Cologne.

At the beginning of 1942, First Lieutenant Scott was offered a command of his own—that of a new Steam Gunboat being built at Cowes. SGBs were a brand-new type of steel-hulled vessel, to be attached to coastal forces. Peter Scott's boat, SGB9, later named *Grey Goose,* was the flotilla leader and was ready in time to participate in the Dieppe raid that August. Its task was to support the landings on the right flank, beaches Orange I and II.

They supported the landing parties by laying smoke and shelling gun positions; during this time they were attacked by several aircraft. Both Allied and German pilots shot down off the coast were rescued by SGB9.

After Dieppe the SGBs were involved in constant Channel patrols in which they frequently came up against German E-boats. Peter Scott describes such an incident which took place on November 19, 1942.

'It was on that morning that I first encountered Kapitan-leutnant "Charlie" Muller, an already famous E-boat Commander. We were in station astern of a westbound convoy near Start Point and I was asleep in the charthouse when the alarm bells rang. In a second I was on the bridge, and could see a starshell floating down to seaward of us. "What's up?" I asked. "Just a starshell, I think the trawler on the port bow of the convoy must have fired it," said Jock Henderson. Then suddenly "Clang!" as a torpedo hit the merchant ship just ahead of us. As I hauled out to port and increased speed there were three more explosions and then we saw the tracks of two more torpedoes approaching. One passed ahead, the other right under the ship, or so it seemed, though most probably the torpedo itself was just ahead of us, for the wake of bubbles is some way behind the "fish" itself. We and the other escort ships all fired starshell now, and by its light we could see five E-boats about a mile and a half away. As we made after them they disappeared into a cloud of their own smoke.'

In 1943, he broadcast on the BBC about the work of the Coastal Forces, and this became the first of several programmes.

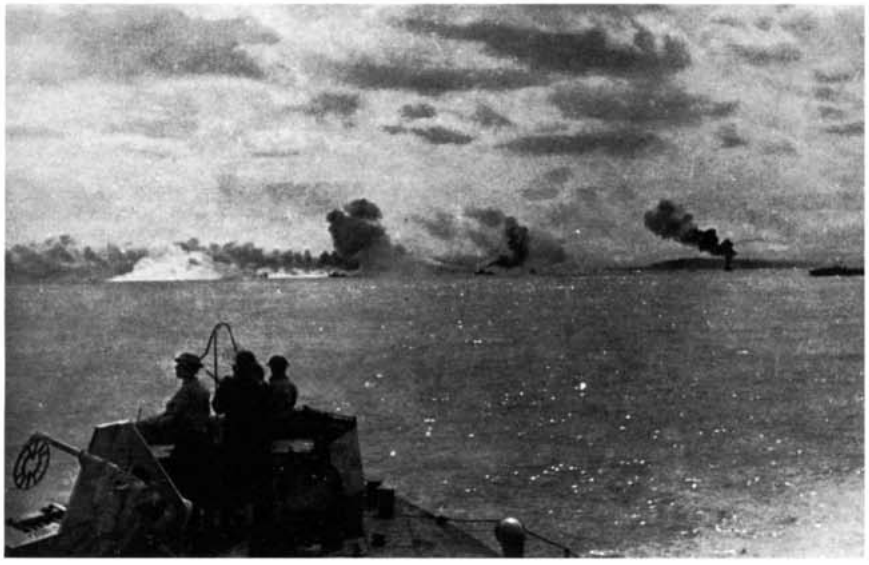
On the night of April 15/16, 1943 an eight-minute action took place in the Baie de la Seine, Scott having taken over SGB6 whilst his own boat was undergoing repairs.

'We sighted them at three and a half miles. Unfortunately they turned 180° just then, otherwise we might have been able to sneak up from astern . . . We hit them fairly hard—the second ship principally and also the third. Two or three times there were sudden "flare-ups" on the gun platform of the second ship, as of small cordite fires. Tracer was very blinding and so bright that the moonlight seemed to make no difference to it. The targets were almost directly up moon for all the first part of the action . . . The trawlers turned away . . . I tried to get back to starboard but the steering had gone. We tried steering by engines but the rudders were at Port 20 so it was hopeless. We could see the Germans about 2,000 yards away flashing to each other.

'We didn't get our steering right for half an hour, indeed it was quite a relief when we did. We beetled off eastward and then after half an hour we turned south, thinking we were ahead of them by then, and started to sweep back at slow speed. Suddenly we sighted them right ahead about three and a half miles with terrific bow waves, obviously legging it at speed.

'The leading trawler opened fire on us when we were turning towards and were still about

**The smoke-screens being laid outside Dieppe photographed from the bridge of Lieutenant-Commander Scott's boat SGB9, later renamed Grey Goose.**



**The Oerlikon gunners on Peter Scott's boat during battle on the night of April 15/16, 1943. L-R Able Seaman A. Patterson of Easington, Durham; Able Seaman J. With of Dagenham, Essex and Able Seaman D. M. Henderson of Airdrie, Scotland (IWM).**

1,200-1,400 yards away. I gave the order to open fire. The range was closed to about 600 yards and then it was quite obvious that we could not turn far enough to starboard to cross the leader's bow. I was not at all anxious at that stage to swop punches on parallel courses at close range as the enemy was firing four-inch, at least one if not two two-pounders, and at least four Oerlikons. So I turned away to port, and checked fire so as not to waste ammo.

'We opened fire at about 500 yards at Red 30 degrees and by the time the leading trawler was abeam it had been silenced. Now I checked the fire and tried to get the three-inch gun to carry on firing, but communications to it had failed. After this it only fired two more rounds before it broke down for good. The semi-automatic gear was not properly disengaged and the gun ran out and would not come forward again, as it had bent the rod. We did one more run by which time practically all ready-use ammo. was expended.

'It was now getting very late and it seemed to me to be too late for a boarding operation, particularly as the trawler had manned a .303 machine gun and was evidently not quite ripe for boarding. She was spraying us with inaccurate bursts. I therefore decided to fire a torpedo and drew off to about 500 yards on the down moon side. The trawler had now swung back to starboard and I reckoned it had stopped. The first torpedo to report 'ready' was the starboard one and so that was the one I fired—at a range of about 400 yards.

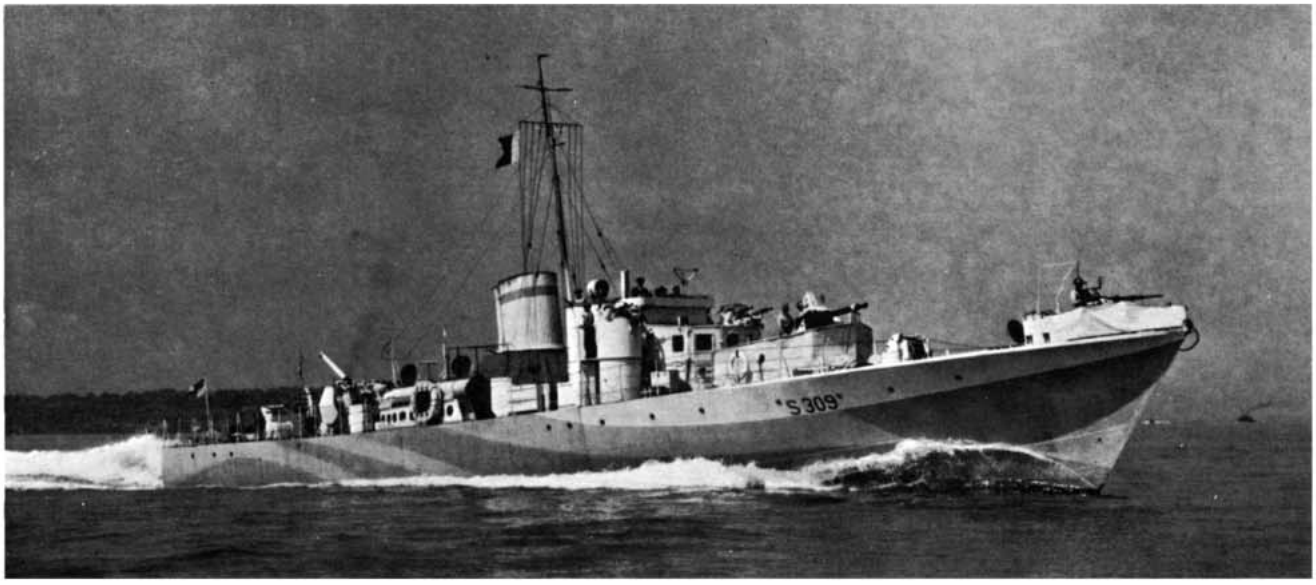
'The torpedo ran all right as far as I could see but the track passed about two or three yards astern of the target. I was so horrified by missing that I decided not to fire the other one. Instead we ranged up alongside the trawler at about 100-150 yards and fired at her with all that would still fire—which turned out to be the starboard point-five and nothing else.

'The point-five was using no tracer and was raking the target from end to end. You could hear the clatter of it against the trawler. But suddenly, the after Oerlikon on the target came to life and its first burst went into our bridge and into the caboose below. One incendiary shell came into our bridge and exploded knocking us down (five of us) but only wounding Harris (the navigator) and him only slightly. The bridge was full of smoke and luminous incendiary composition and splinters of the binnacle and there was a goodly fire going in the caboose amongst the point-five ammunition boxes. I had been going slow both, but decided that I had better disengage until the fire had been dealt with so I drew off to about 1,500 yards.'

Peter Scott's personal leadership had already been acknowledged by the award of the D.S.C. The additional award of a bar came for a desperate encounter fought by five of the SGBs against German trawlers and R-boats on the night of July 27 off Cap Levi.

Four SGBs left Dover harbour on September 4 to intercept an enemy force leaving Boulogne. Composition of the German force was unknown; that is, until it was illuminated by a flare and seen to be seven M-class minesweepers in line ahead. These 700-ton vessels with 4.1 in. guns totally outmatched the SGBs, but the decision was to harry the convoy. It was impossible to approach the force unseen as the Germans would fire starshell to illuminate the SGBs when still about 3500 yards away, and the minesweepers' guns could easily follow them out to 5000 yards. Peter Scott decided therefore to lead the small British Force ahead and round the Germans to lie in wait further down the coast. In doing so they ran slap bang into another German patrol to seaward.

**SGB9 Grey Goose, the flotilla leader, at speed. Lieutenant-Commander Scott on the Bridge.**



'Here was a sudden opportunity, and I decided to take it . . . it seemed we had a better chance of doing them down than we had of getting at the Minesweepers. I came hard round to port and opened fire, and again the tracers began to buzz about like purposeful red bumble-bees, the smaller machine guns burst forth in tinselly white and yellow showers like Golden Rain, and all the while the scene was lit by the bright white starshells hanging overhead.

'As we closed in to 500 yards and came round in an arc, we seemed all to be firing at the centre. I have never seen nicer shooting—there was nothing wild about it, just deliberate bursts ploughing straight into the targets. We took the right-hand one, and in a matter of seconds the stream of tracer from him had dwindled to nothing.

'Clouds of smoke were coming out of him, and a fine red glow showed under the bridge aft, apparently through a hole in the ship's side. He was about 150 yards away. If only we could illuminate him our fire would be twice as effective, but we had run out of starshell. As usual, the wireless aerial fell in coils all round us on the bridge, the result of a hit on the mast.

'We were overtaking the enemy, and I got a good view of him by the light of someone else's starshell. He was one of the converted landing-craft type known to the enemy as an AF boat and to us as a TLC, type III. When he had fallen just abaft the beam he suddenly got one of his eighty-eight millimetre guns going and clocked us a couple of times in quick succession. They made a terrific "bonk". I felt sure the first one had got the engines and was not surprised to feel the ship lose speed. It was a very curious feeling. I knew for certain that these two hits were eighty-eight millimetre shells, for they pushed the ship over quite a lot when they hit. I remember thinking that if he hit us a couple more times he would finish us; and then miraculously we were still going—and not only that but increasing speed again and turning away to starboard. It seemed almost too good to be true.

'I pressed the engine-room bell, but all the lighting and electrical circuits had gone. The seaman torpedoman popped up beside me, "Port tube badly holed, sir." We did not realise in the din of the battle that a direct hit on the firing mechanism had actually fired the torpedo without our knowing it.

'Many of the guns' crews had been hit (for we had been under fire on and off for two hours) and one gun was jammed, but we would have to tackle the Hun with what we had—including the starboard torpedo; not a very good chance perhaps for a torpedo attack with the rudder jammed hard-a-starboard, but it seemed likely to be the only chance.

'During our turn away both Peter and Jimmy had gone past making a smoke-screen and, so far, the enemy was invisible, but a few moments later we were through the smoke and there was a Hun. I set seven knots for his speed on the sight, and as we swung on I pulled the starboard firing lever and yelled "Fire Sugar". The lever came back freely in my hand. The connections had been shot away, but a couple of seconds later the torpedo went off, fired from the tube. I could see by then that the slight delay would be enough to make it miss ahead as the ship was still swinging to starboard. The fish jumped once and then went away straight, and it passed well across the bows of the enemy, making a bright phosphorescent wake as it went.

'At last we had established a sort of "bush telegraph" between bridge and engine-room and had stopped engines. The Chief got the rudders amidships and reported to the bridge that although there were two gaping holes in the engine room he thought he could keep the ship going, but we should have to steer by main engines.

'It was evident that we were in no case to undertake any more fighting, so we came round to northish and rigged a jury wireless aerial to find out how the others had got on.'

**Lieutenant-Commander Peter Scott reads the signal of congratulations from their Commander-in-Chief to his officers and crew following the encounter with the German armed trawlers (IWM).**

As plans for the invasion of Europe took shape during the winter of 1943, Peter Scott was posted to the HQ staff of the Channel Coastal Forces at Fort Southwick, Portsmouth. Later he moved underground into Portsmouth Combined HQ, responsible for the day-to-day operations of the Coastal Forces. Here it was planned to introduce RAF plotting techniques—radical for the naval forces—using a land-based controller with radar scopes and plot on which to direct the battle at sea. This plan for protecting the invasion forces against E-boat attack was developed by Peter Scott and his chief, Lieutenant C. Dreyer.

As soon as the invasion took place it was Peter Scott's job to cross to Normandy to find suitable sites for their radar aerials to give better plot coverage than could be obtained from stations in England. He crossed on June 15 and remained in France as a Staff Officer to the Flag Officer, British Assault Area, based at Courseulles. Service in the beachhead area gave him a unique opportunity to see the fighting for himself at first-hand.

'My normal routine was still to sit on the Plot in the orchard at Courseulles listening to the R/T with a pair of headphones and talking to the Controller from time to time on the VHF telephone.

'As before, in the mornings I organised the operations for the next night and in the afternoons I either slept or pursued the various missions with which from time to time I was charged. It was decreed at one time that the Commanding Officers of various ships operating in the area would benefit by a brief

**The son of the famous Polar explorer briefs officers at the Light Coastal Forces Base before a patrol along the invasion coast (IWM).**

visit to the front, and as I now knew the roads fairly well I was detailed to act as their guide. Thus it was that on 26th July I wrote of an adventure which had taken place the day before.

'We found ourselves bowling down a road that was comparatively deserted and I explained my theory that if you saw soldiers shaving beside their transport the odds were that they were not actually under fire, a theory which I later disproved.

'The crest of the hill was about half a mile ahead. Having come this far it seemed a pity not to see what could be seen of the battle on the far side. At the cross-roads there was a wall. We decided to leave the jeep by the wall and walk the half-mile along the road. There were a couple of dead horses in the field, and as usual the road was pock-marked with small shell holes; the telegraph poles were splintered and the wires were lying about the roads and ditches. It was a straight road with open rolling fields on either side—no hedges and very few trees.

'In a cluster we walked along the road, the other three dressed in blue naval uniforms. I was in my khaki battledress. After we had walked 300 yards it seemed to me that we were bound for a nasty place and that it was going to be a slow business coming away from it on foot should the shelling start again. As there were several jeeps and motor-cycles and occasionally even larger transport spinning along the road from time to time, I thought we should be much less noticeable in the jeep. One felt so very naked walking along that open road, ant-like, in full view of the enemy. It was therefore agreed that I should go back and fetch the jeep whilst they walked on and I would pick them up. This I did and shortly caught up with them and took them on board. We went on as far as a bend in the road, beyond which the hill sloped gently away to Andre-sur Orne.

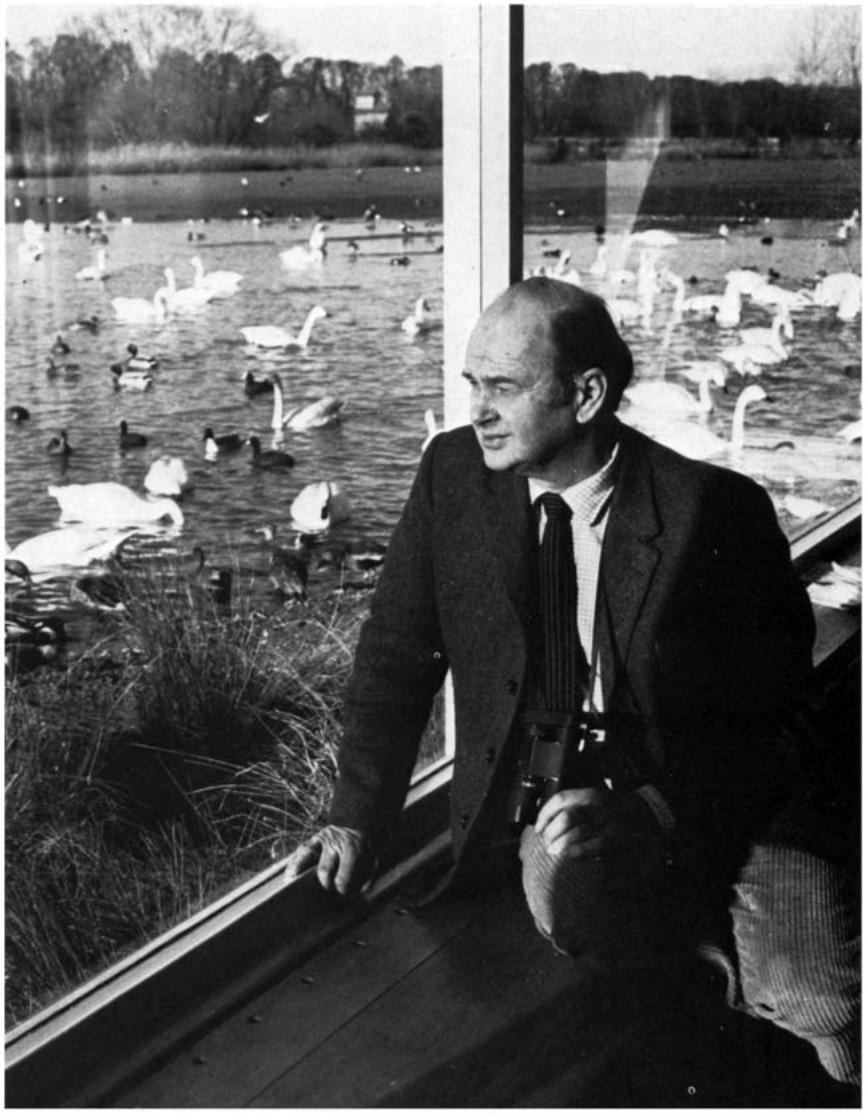
'Still the jeeps and motor-cycles flashed past as we stood by the side of the road with field glasses, looking across to the German woods. One of the motor-cyclists pulled up and even turned back to come to us. "I wouldn't stop here long," he advised, "and if you do I should get near a foxhole." We thanked him and he went on his way. A hundred yards back down the road we had seen one of his colleagues sprawled, dead, by the side of his shattered motor-cycle where a shell had hit the road. We took the advice. There did not seem to be much mining on this sector of the front. The verges were apparently clear and across the road were some convenient foxholes. We walked across to them and sat down on the mounds of earth. "If we look carefully with glasses we'll probably be able to see tanks and things and follow the course of the battle," I said, and we sat and looked.

'As we talked I stood up to see if I could see anything over to the left with the glasses. Exactly as I got to my feet there was a deafening crack and a shell burst about 100 yards behind us. Rather quickly we jumped down into the foxhole, except for Tony Hollings who lay flat outside in the grass. When I looked behind I saw that our jeep 100 yards away stood fairly and squarely on the skyline. In addition another jeep containing two soldiers who were concerned with joining a broken telephone wire had pulled up nearby. They had taken the precaution of driving off the road into a slight hollow so that at least their jeep didn't look like the side of a house. They had to be there and we did not. They cannot have regarded our presence or that of our jeep with any favour.

'We did not have very long to take in this situation. The next shell landed exactly opposite our foxhole and about twenty yards to our right. I bobbed down to the bottom of the foxhole, which was a slit in the ground some six feet long, two feet wide and four feet deep. The situation was unhealthy. More shells were arriving, many of them close to the jeep. Indeed one had landed on the road within about four or five yards of it, and from where we were we could not see whether or not the little car had been damaged.

'Evidently the German observers had seen us and deemed us a worthy target. The tricky part was that time was now short and within the next half-hour we should have to start back if the patrols off Le Havre were to sail on time. After about ten minutes the shelling ceased and we held a council of war. There were two schools of thought—one that we should crawl all the way back to the jeep and hope to avoid observation, the other that we should run like hell and hope to get going before they started up again. We started off crawling and finished by running. We ran across the road and along the far ditch. At one point it was full of corpses which had been hidden by a few hastily dug turfs, probably done during the previous night. Tony did not notice them and ran over the top of the turfs. I saw and smelt them and ran around the boots which protruded at the end.

'We jumped across the road, leapt into the jeep, which showed no sign of damage, and trod on the starter. I crashed into gear and we sped away down the road. We had gone less than 400 yards when a shell burst in the field opposite where we had been. Such was evidently the communication delay between the German observer and his guns. We bowled back at a good pace, much relieved that we had escaped so lightly from our folly.'



**Peter Scott the naturalist, pictured in his studio overlooking Rushy Pen at Slimbridge, Gloucestershire. The house was built and the lake excavated as a base for the Severn Wildfowl Trust (Philippa Scott).**

At the beginning of August, Scott was detailed to set up a similar radar plot to help operate US PT boats out of Cherbourg before returning to HQ at Portsmouth. By September no targets remained for Coastal Forces west of the straits of Dover.

At the end of the year, Peter Scott was promised command of a new frigate being built at Leith, the *Cardigan Bay*, but before she was completed, the war in Europe was at an end.

One last privilege remained—to be present when the first surviving German E-boats surrendered and sailed to Felixstowe. Peter Scott recalls that the opportunity to be in at the surrender of the craft, which he had spent the major part of the war fighting, had a dramatic finality about it. On May 12, 1945, MTBs left Felixstowe for the rendezvous and, at about two o'clock, two E-boats came over the horizon from Rotterdam. After Peter Scott together with two other officers and two signalmen were put on board, the two German boats were escorted towards the shore:

'With some difficulty we persuaded the Germans to fall their crews in on deck as they entered harbour, where a great crowd of spectators was assembled on all the piers and jetties . . . At once the armed guards filed on board and the Germans were hustled off their boats . . . it was the end!'

AFTER THE BATTLE

PRESERVATION

# AMERICA'S PRESERVED WARSHIPS

**Under United States Federal law, decommissioned Navy ships can be acquired by individual states as war memorials providing they are suitably berthed and publicly exhibited. It is no wonder, therefore, that four US battleships bearing the names of American states, the *USS Alabama, Massachusetts, North Carolina* and *Texas* are preserved today in their individual states. The four battleships, which have been anchored in berths along the Atlantic seaboard of America for several years, were joined in 1975 by the *Yorktown,* the only preserved aircraft-carrier in the world.**

## USS Yorktown

The *Yorktown,* which has seen service in three wars, WWII, Korea and Vietnam, was dedicated as a memorial at Charleston, South Carolina on October 13, 1975, the bicentennial of the US Navy, and opened to the public on January 1, 1976.

'The Fighting Lady' is the fourth American ship to bear the name Yorktown. Perhaps the better known *Yorktown* was the one sunk during a Japanese naval and air bombardment on June 7, 1942 during the Battle of Midway. The *Yorktown* now at Charleston, the CVS-10, was under construction and due to be named 'Bon Homme Richard' when *Yorktown* the third was sunk. It was decided to rename her after the ship which had been sunk at Midway and she was launched on April 4, 1943.

The *Yorktown* has an overall length of 872ft and width at the flight deck is 147ft 6ins. The displacement is 27,100 tons, draft 28ft 7ins, and could reach a speed of 33 knots. It was designed to carry 360 officers and 3,088 men plus more than 80 aircraft.

In August of 1943, the *Yorktown* became the flagship of Carrier Task Force 15 and participated in the Marcus Islands raid where she assisted in air strikes against Japanese installations. Following these raids, the *Yorktown* became a part of Task Force 14, the largest carrier force ever organized. Along with the *Lexington, Cowpens, Independence* and *Belleau Wood,* aided by battleships and cruisers, the Japanese-occupied Wake Islands were attacked. The *Yorktown* then became the flagship of the newly designated Fast Carrier Force of the Navy which participated in the invasion and occupation of the Gilbert Islands.

In January, 1944, the *Yorktown* lent support to the invasion and capture of the Marshall Islands, and in February of the same year the aircraft from the carrier made attacks on the western end of Kwajalein to support the

**Top: The Yorktown arrives at Charleston, South Carolina, under tow on June 15, 1975. Below: Moored at her permanent berth at Patriots Point.**

American troops participating in the beach landings.

Thereafter she put to sea as the flagship of a three-carrier task group to destroy the Japanese fortress base at Truk Atoll in the Carolinas. This mission was accomplished so successfully that the capture of Eniwetok in the Marshalls was able to proceed without interference from any Japanese aircraft.

Then the *Yorktown* participated in bombing raids on Saipan, Tinian, Guam and Iwo Jima. In June, 1944, as the *Yorktown* launched her bombers and fighters against Iwo Jima, American troops stormed the shores of Saipan. In subsequent battles she assisted in destroying 243 Japanese planes, as well as helping to sink the Japanese carrier *Hiji*.

The *Yorktown* then became part of Fast Carrier Task Force 58 under Vice-Admiral Marc A. Mitscher. Their mission was to launch the first carrier air strikes against the Japanese mainland. During the course of this mission she gave direct support to the amphibious landings at Iwo Jima, and later to the amphibious landings at Okinawa, where her planes helped to sink the Japanese battleship *Yamato*.

When the Pacific War ended, the *Yorktown* was assigned for duty as one of the vessels designated to return veterans home from Pacific bases.

On January 9, 1947, she was placed in the US Pacific Reserve Fleet, where she remained until the invasion of South Korea, when she received a modernization overhaul. Following recommissioning in December 1952, she became part of the Seventh Fleet in the Far East, and on September 15, 1953, the *Yorktown* became the flagship of Fast Carrier Task Force 77.

In March 1954, the *Yorktown* returned to Alameda, California, to participate in the Twentieth Century-Fox film 'Jet Carrier' which covered all phases of carrier operations.

In July 1954, the *Yorktown* assisted in the Nationalist Chinese evacuation of Tachen Islands. She returned to the States in 1955 for modernization which included the fitting of an angled flight deck, and in 1956 she again returned to the Far East as part of the Seventh Fleet. Her last wartime assignment was in the Gulf of Tonkin off the coast of Vietnam.

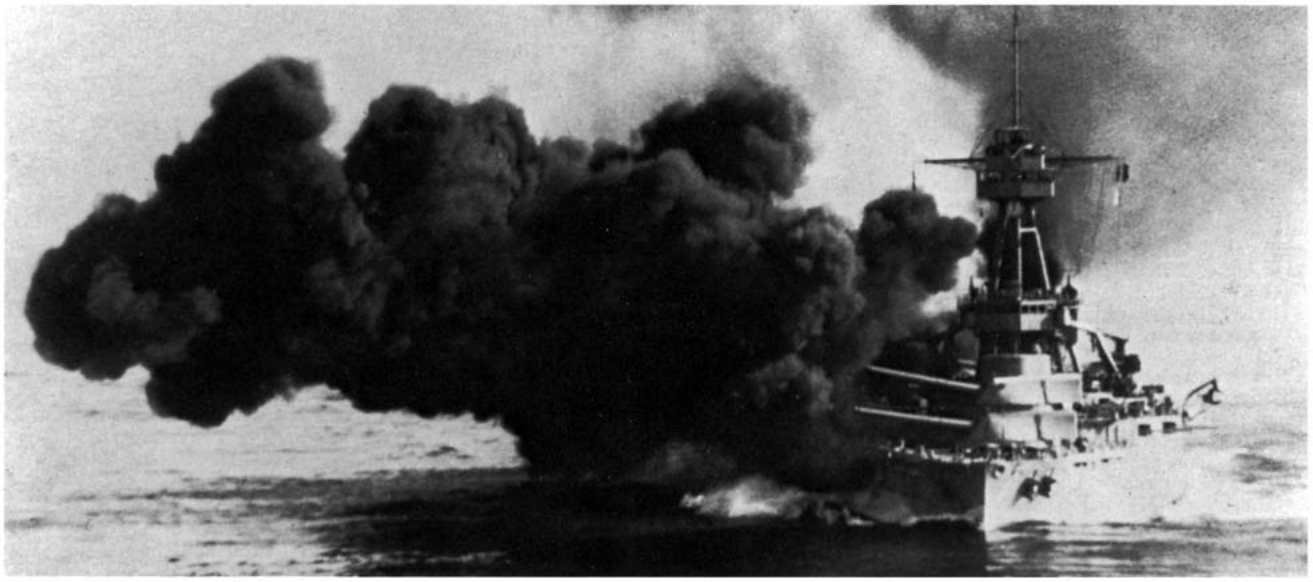
By 1958, the *Yorktown* had been converted to an anti-submarine warfare aircraft carrier. She became home base for squadrons of fixed-wing Tracker aircraft, a helicopter squadron and several airborne, early-warning radar-equipped aircraft.

The remainder of her service was relatively routine and uneventful with the exception of her role in the pick-up operation of the astronauts following the successful Apollo 8 space mission.

In June 1970, the *Yorktown* was decommissioned and went into mothballs at Bayonne, New Jersey. There she was stripped of virtually every movable item and left to rust.

In 1973, the South Carolina General Assembly created 'Patriots Point', a 500-acre site beside Charleston harbour, intended as a mammoth Naval and Maritime historical memorial centre. Moorings have been allowed for the inclusion of four capital ships, the first of these being the *Yorktown*.

In January 1974, after four Charleston banks agreed to loan the State $3 million, the ship was purchased from the Navy at a bargain price— $1! She was towed from Bayonne to Charleston, a journey of 600 miles. There she was laid to rest in a specially-dredged mooring, firmly embedded on the bottom of the harbour. This has enabled the carrier to be moored without lines or cables, giving the effect of a ship at sea. The first job, at the time of writing, will be a $250,000 coat of paint!



# USS Texas

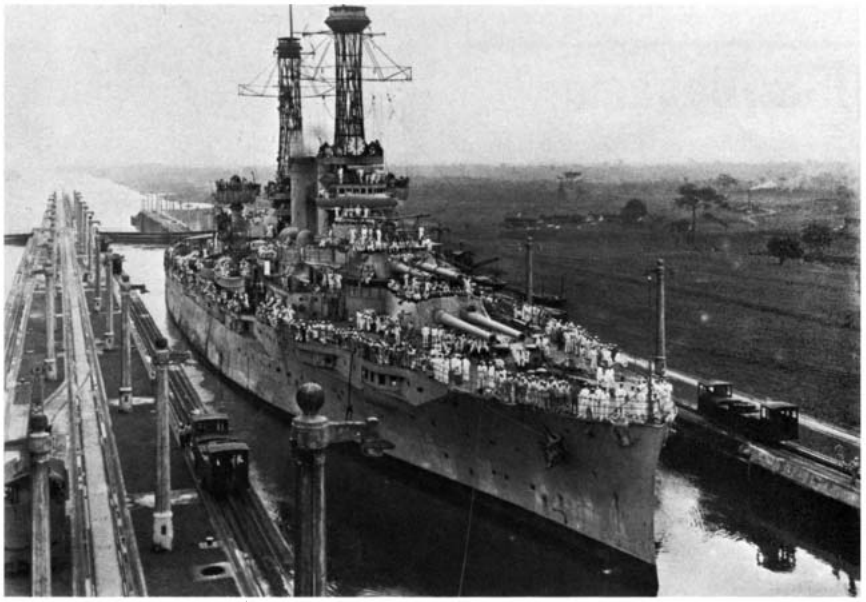
The first battleship to be preserved following the end of WWII was the 'Mighty T', the *USS Texas*, in a ceremony at the San Jacinto Battleground Park near Houston, Texas, on April 21, 1948.

The *Texas* was built for a cost of $5,830,000 and was launched on May 18, 1912. She was 573ft long, 106ft 1in. in beam with a full load displacement of 34,000 tons and could steam on her coal-fired boilers at 21 knots.

On January 30, 1918, the *Texas* joined the Sixth Battle Squadron of the Grand Fleet and, on her fifth day out, sighted a submarine which she fired at with one of her 5-inch guns. The reply was a torpedo on the starboard quarter. The ship was quickly swung hard right and the torpedo passed harmlessly alongside. At the end of the Great War, the *Texas* returned to the United States Fleet and, in 1919, joined the Pacific Fleet.

She was modernised in 1925-26 and the coal boilers converted to oil. Her main armament consisted of ten 14-inch guns in five turrets. Secondary armament was provided by six 5-inch and ten 3-inch guns with 20 and 40mm guns for anti-aircraft protection.

By 1940 she had become the flagship of



**Top: The Texas 'does her thing' shelling coastal batteries. Note the considerable alterations to the ship compared with the photograph above, taken on July 25, 1919. Here, the Texas is in the middle-east chamber of the Gatun Locks on the Panama Canal.**

Admiral Ernest J. King, Commander of the US Atlantic Fleet. Six months before the United States declared war on Germany the *Texas* was sailing fully-armed neutrality patrols across the Atlantic. When war came, although the aged battleship was then thirty years old, she still undertook operations to support amphibious landings on both sides of the world.

In 1942, she supported the landings at Casablanca in North Africa and two years later was part of the invasion fleet which sailed to Normandy. Off Cherbourg, she fired 250 shells at coastal batteries and received two hits herself. Both were shells of 288mm. The first hit the control tower and exploded at the top of the navigation bridge, killing one man and injuring fourteen others, whilst the other struck the side of the ship and penetrated an officer's cabin without exploding.

After repairs, the *Texas* headed for the Pacific. There she joined the US Pacific Fleet and shelled Iwo Jima and, at Okinawa, expended four shiploads of ammunition.

After the war there was no place in the US Navy for a ship of the dreadnought era and it was decided to send her for scrapping. Although the Texas governor, Beauford Jester, appointed a Battleship Texas Commission in 1947 to save the ship, a year later the campaign had still not got off the ground.

The Chairman of the Commission, Lloyd Gregory, was able to get several postponements but finally, the patience of the Navy was at an end. The assistant secretary of the Navy telephoned Gregory: 'The battleship *Texas*, to be towed by two big Navy tugs, is leaving Norfolk next Monday. You'd better be able to take care of her in about 15 days!'

Lloyd Gregory decided to issue an ultimatum through newspapers and press associations: 'IT'S TIME FOR TEXAS TO PUT UP OR SHUT UP ABOUT HER PATRIOTISM'.

The challenge worked a near-miracle. Within two weeks, $75,000 had been raised by Texas citizens and schoolchildren. Cinema audiences contributed $40,000 of the total in collections taken after the showing of a ten-minute film featuring appeals from fellow Texans, Hollywood actresses Linda Darnell and Dana Andrews.

The biggest piece of luck was when the commission met a young marine engineer in Houston, Cyril S. Adams. Existing estimates for the cost of dredging a berth for the *Texas* were $300,000. Adams said he could do it for $75,000—and did!

The *Texas* was placed in the mooring and clay packed around the hull. On San Jacinto Day, April 21, 1948, (the Anniversary of the Texas-Mexican battle in 1836 which eventually led to independence for the state) the *USS Texas* was decommissioned and presented to the state. She was promptly recommissioned as the Flagship of the Texas Navy!

**The 'Mighty T', now Flagship of the Texas Navy, at rest in the specially dredged basin. In the background is the 570ft San Jacinto Monument commemorating the Texan's victory over the Mexican General Santa Anna on April 21, 1836 (Harper Leiper Studios).**

# USS Alabama

The *USS Alabama* (BB60) is the fourth American ship in a hundred years to bear that name. She was also the fourth battleship to be built in the South Dakota class, the others being the *South Dakota, Indiana* and *Massachusetts*. The keel was laid at the Norfolk Navy Yard at Portsmouth, Virginia, on February 1, 1940; she was launched on February 16, 1942 and commissioned exactly six months later.

She displaced 44,500 tons fully loaded; had a length of 679ft 5in and beam of 108ft 1½ in. She was armed with nine 16-inch, twenty 5-inch and forty-six anti-aircraft guns of 20 and 40mm (later increased to one hundred guns). Armour varied in thickness from 8 inches on the decks to 18 inches on the turrets. She was powered by four Westinghouse turbines driven by eight Foster Wheeler boilers which developed 130,000 hp; her four 17ft screws gave her a maximum speed of 28 knots.

**Right: The Alabama sails from Puget Sound, Washington, for the Pacific in April 1945.**

In 1942, the British and American forces in the Atlantic were hard pressed sailing convoys to Britain and Russia. After a minimum training period, the *Alabama* joined Task Force 22 and, two months later, Task Force 61 (which included the *South Dakota*) in Newfoundland before sailing to Scapa Flow in the Orkney Islands.

On May 19, 1943 she joined the British Home Fleet and, in the hope of deceiving the Germans, was always referred to as the *Courageous*, an aircraft carrier torpedoed on September 17, 1939.

In August 1943, the *Alabama* returned to the United States and was transferred to the Pacific theatre. There her first operation was in Operation Galvanic—the attack on the Gilbert and Ellice Islands. The *Alabama* formed part of the protective screen for the aircraft carrier *Yorktown* in what was probably the bitterest landing in the Pacific at Tarawa Atoll on November 20.

From this auspicious beginning, the *Alabama* fought her way across the Pacific as island after island was attacked and captured: the Marshalls, Carolinas and Marianas before attacking Japanese bases in Hollandia along the New Guinea coast in April 1944. For these operations she earned five battle stars. Four more stars were awarded for the Western Caroline Islands Operation, Leyte, Okinawa and the final Third Fleet Operations against the Japanese mainland.

The *Alabama* returned to San Francisco in October 1945 carrying 700 Okinawa veterans. On October 27—Navy Day—the ship was opened to the public and nine thousand visitors explored the ship.

She then spent the next four months at the south Californian port of San Pedro before sailing to Seattle. On May 23, 1946 the *Alabama* entered the Puget Sound Naval Shipyard for 'mothballing'. She was decommissioned on January 9, 1947 and assigned to the Pacific Reserve Fleet where she spent the next fifteen years.

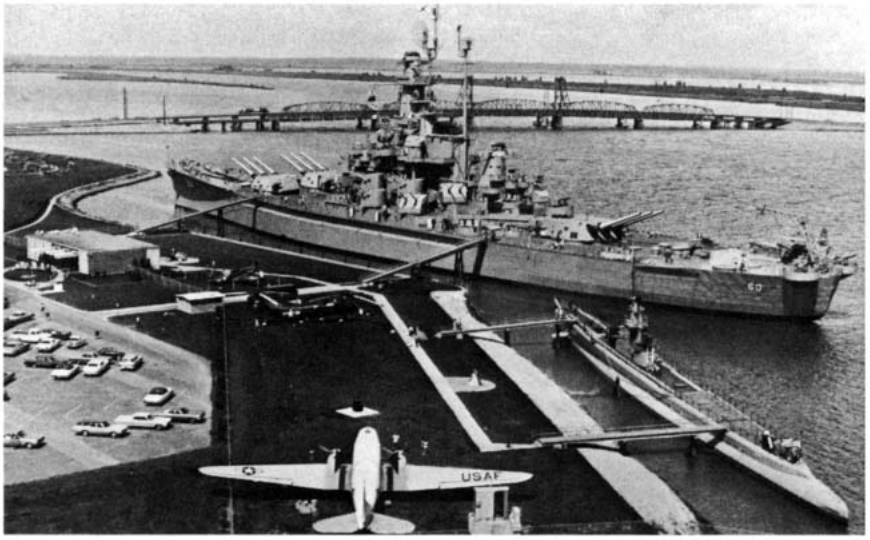
By the 1960s, some of the US Navy's warships had already gone to the breakers yard. When the *Alabama* was struck off the US Navy list on June 1, 1962, it was evident that her turn with the cutting torch was not far away. Patriotic citizens in the state of Alabama quickly raised the question of the preservation of their ship as a War Memorial.

The Mobile Chamber of Commerce discovered it would cost $1 million to save the ship as it would have to be towed 5,600 miles from Bremerton on the Pacific coast to Mobile on the Atlantic Ocean.

The USS Alabama Commission came up with a typically American way of raising the money. They formed the Alabama Navy! For a contribution of $100 a commission of Rear Admiral was bestowed on the donor. Five hundred dollars bought the rank of Vice Admiral and a thousand that of Full Admiral in the Alabama Navy. Although the state's navy has only one battleship it has more admirals than any other. Schoolchildren added $100,000 to the fund, no doubt being enrolled as shipmates!

The ship was saved from the scrapyard and sold to the state of Alabama on June 16, 1964. The propellers were removed for the mammoth tow, the longest heavy-tow then on record. On September 14, 1964 the ship reached Mobile. Her new home was a 75-acre park where she was later joined by the submarine *USS Drum*, which had sunk fifteen ships. Beautifully restored, a Kingfisher seaplane stands on the stern catapult whilst other aircraft are displayed on the shore.

**Below: The USS Alabama at Battleship Park, Mobile, Alabama. In the foreground is the submarine Drum (SS-228) which was opened to visitors on July 4, 1969.**



# USS North Carolina

The *North Carolina* (BB-55), the first of a new design of warship, was launched on June 13, 1940. Fitted with nine 16-inch guns with a range of twenty-two miles, twenty 5-inch, sixty 40mm and fifty-six 20mm she was the most powerful sea weapon ever built by the United States. Her length was 728ft 9ins, width 108ft and with a displacement of 46,770 tons. She had cost over $76 million to build.

She was commissioned on April 9, 1941 and saw her first real action in the Battle of the Eastern Solomons on August 24, 1942 when, attacked by Japanese dive-bombers and torpedo planes, she brought down seven aircraft.

On September 14, 1942, while patrolling off Guadalcanal she was hit by a torpedo fired by the Japanese submarine I-15. The explosion blew a hole 32 feet by 18 feet, flooding forward compartments and killing five sailors. Repairs took ten weeks to complete at Pearl Harbour.

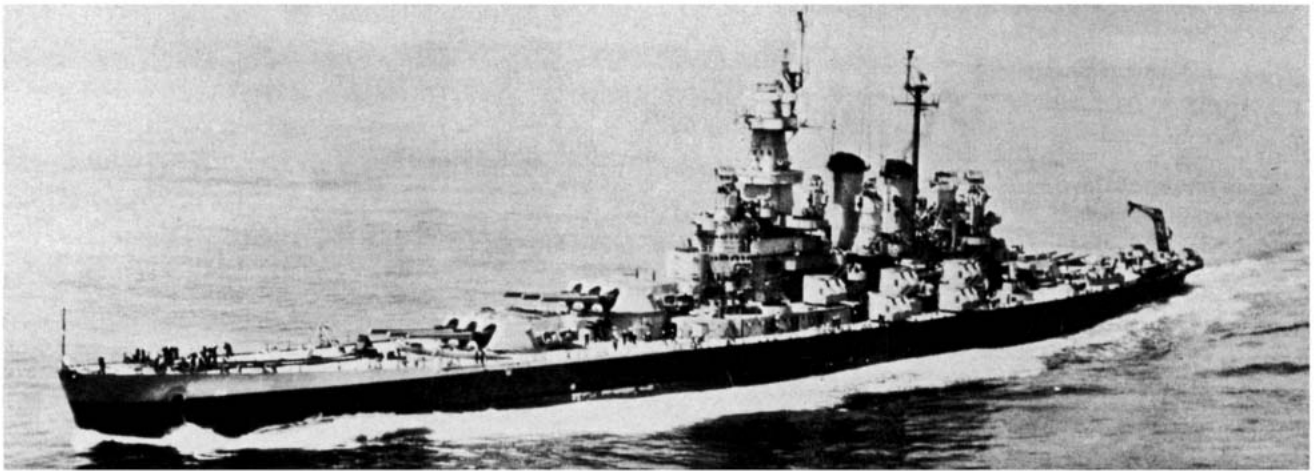
Returning to sea, 'The Showboat' earned ten more battle stars by August 1945, two having already been awarded to her.

On June 1, 1960, the *North Carolina* was deleted from the official Navy List. When a member of Wilmington American Legion, James Craig, Jnr., put the idea of saving the battleship to the State Governor, Luther Hodges, the Governor immediately wrote to Washington requesting that the Navy postpone its plans to scrap the battleship, pending an investigation into the possibilities of saving the ship.

Governor Hodges set up a Battleship Advisory Committee to investigate the feasibility of establishing the warship as a state memorial. It resulted in the formation of a Commission which began a 'Let's bring the *USS North Carolina* home' campaign which ultimately raised $345,000. This exceeded the target by over $100,000 and a quarter of the total sum had been given entirely by school children. Others who donated $100 or more were made 'Admirals of the North Carolina Navy'.

Late in September 1961, the warship began her final voyage—under tow. On October 2, she entered the Cape Fear River where thousands lined the banks to cheer her progress. In the late afternoon she arrived at

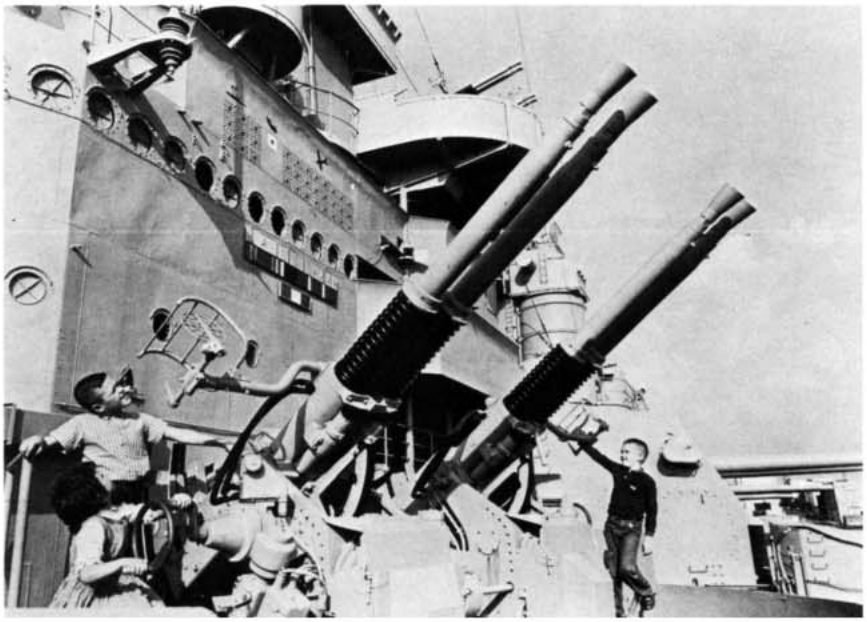
**The USS North Carolina during a patrol.**



55

the Port of Wilmington. At the point where she was to be turned into the prepared, permanent berth, the ship was wider than the river. As she was being swung around, the stern jammed against a floating restaurant and the bow went aground. For thirty minutes, eleven tugs and a bulldozer worked to free her from the mud bank. Finally, she floated again and was eased into position.

The *North Carolina* was dedicated as a memorial on April 29, 1962 and, today, beautifully restored and maintained, she is visited by a quarter of a million visitors a year. During the summer months, the ship is the centre of a spectacular 'son et lumiere' presentation using the latest, fully automated equipment. Stereo equipment reproduces the sound of gunfire, commands from the bridge and the roar of attacking aircraft in suicide attacks. The guns aboard the ship emit real flames as they simulate firing to tell the story of 'The Immortal Showboat'.



**Right: Naturally the most popular feature for young visitors on any of the warships are the guns. Here, three youngsters play on one of the North Carolina's 40mm anti-aircraft guns. In the background the ship's WWII scoreboard.**

# USS Massachusetts

Three long years of effort by former crew members and citizens of the State of Massachusetts led to successs on June 4, 1965 when the Under Secretary of the Navy and the President of the USS Massachusetts Memorial Committee signed the contract which transferred ownership of the battleship from the US Navy to the Memorial Committee.

'Big Mamie' had been just 48 hours from scrapping, having survived seven previous decisions to send her to the breakers when a ninety-day stay of execution was granted.

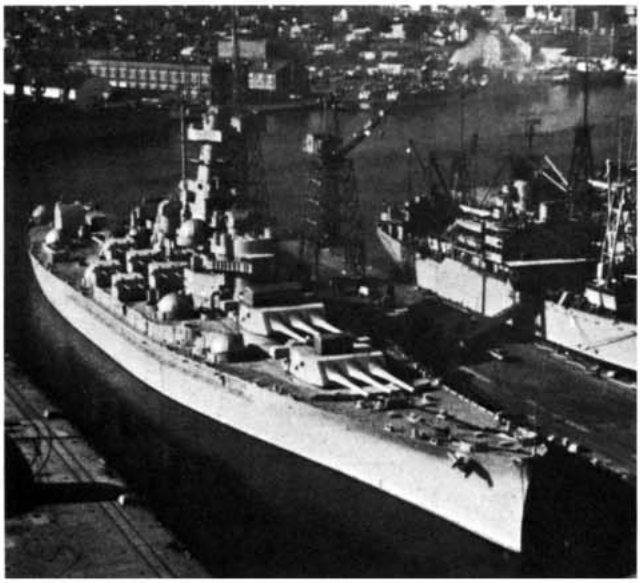
The ship, which had been commissioned on May 12, 1942, had taken nearly three years to build and cost nearly $77 million. Twenty years later, the US Navy had asked for only $100,000 and a guarantee that the ship would be well cared for. Massachusetts school children donated half the amount needed and the remainder was given by the state's citizens.

The 35,000-ton battleship had fired the first 16-inch shell to open America's European war in the 1942 North African landings, and the last big naval shell in the Pacific theatre in August 1945. In between, she had logged more than 225,000 nautical miles; taken part in thirty-five engagements and nine bombardments; sunk or heavily damaged five enemy ships; shot down eighteen Japanese aircraft and rescued seven pilots from the sea. She had won eleven battle stars.

Her first action was against the French battleship *Jean Bart* moored in Casablanca harbour. The French warship was of equivalent tonnage but with a main armament of four fifteen-inch guns in the forward turret as opposed to the *Massachusetts'* nine sixteen-inch guns. The French ship fired first; the reply was nine sixteen-inch salvos with five hits on the French ship. A sixth shell jammed the *Jean Bart's* forward turret and silenced the entire main battery. This shell ricocheted into Casablanca without exploding and was later recovered and set up as a trophy in the French Admiralty Building.

Two and a half hours later a shell from one of the shore batteries hit the *Massachusetts* on the main forward deck and exploded below. Within three minutes lookouts spotted the wakes of four French torpedoes, just off the port bow closing fast with less than a thousand yards to run. Two fast emergency turns slipped the *Massachusetts* between the third and fourth torpedos in the spread—number four torpedo passing less than fifteen feet from the starboard side.

**The forecastle and main deck of 'Big Mamie' (BB59) moored at Battleship Cove, twenty miles south of Providence, Massachusetts.**



Above: Cocoons around her guns, the Massachusetts spent eighteen years mothballed as part of the US Reserve Fleet.

The 'Massachusetts Navy' includes the USS Joseph P. Kennedy Jnr, submarine USS Lionfish and PT boats, Nos. 619 and 796.

The following year, 1943, saw the *Massachusetts* in the Pacific Ocean, and on November 19-21 she was protecting the carrier group whose planes were striking at the Gilbert Islands. Then, on December 8, she fired 136 sixteen-inch and 400 five-inch shells at the Japanese-held island of Nauru.

The *Massachusetts* stayed in the Pacific for the increasing battles against Japanese forces. On July 1, 1945, 'Big Mamie' sailed for what was to be the final offensive action of the War—the Third Fleet's operations against Japan. On July 14, the *Massachusetts* joined the bombardment unit to shell the home islands of Japan for the first time—the target the Imperial Ironworks at Kamaishi.

The *Massachusetts* entered the Norfolk Naval Shipyard for 'mothballing' on May 20, 1946. Metal cocoons were installed over the gun emplacements and machinery spaces were carefully dehumidified. She was decommissioned on March 27, 1947 and assigned to the Norfolk Group US Atlantic Reserve Fleet. There she remained for eighteen years until she was towed down the Elizabeth River on June 8, 1965. Crewed by an enthusiastic, twenty-six-man crew, on June 12 the *Massachusetts* passed the Mount Hope bridge and arrived in Fall River to her new permanent home.

# USS Olympia

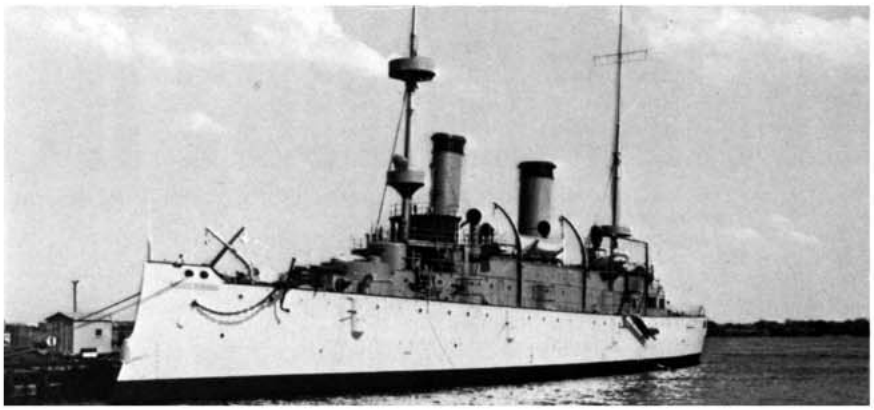
In case she feels left out, we ought to mention that the 1890s vintage cruiser *Olympia*, named after the capital of the State of Washington, is preserved at Philadelphia, Pennsylvania.

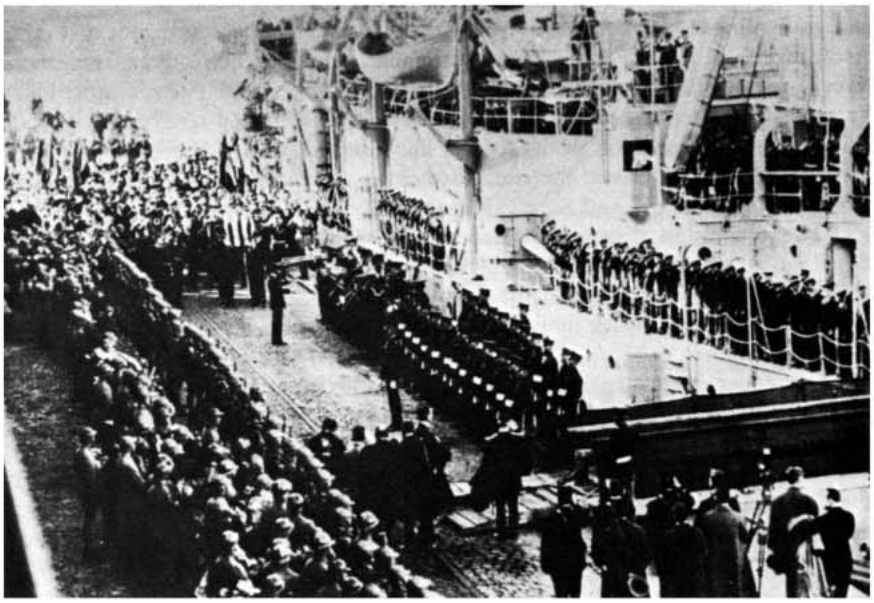
Miniature by comparison to the other preserved battleships, she displaces 5870 tons, has a length of 344ft and a beam of 53ft. The ship is armed with four 8-inch, ten 5-inch, fourteen 6-pdrs and six 1-pdr guns. She was launched in 1892 and is the last survivor of the Spanish-American War fleets. Her first action was in the Battle of Manila Bay on May 1, 1898 when, as Admiral Dewey's flagship, she fired the first shot in that war.

In World War I, she served on escort and patrol duties off New York and Nova Scotia until April 1918. The *Olympia* then sailed to land a force at Murmansk in Russia on June 8, 1918.

Her last mission was a fitting end to a thirty-year career. On October 3, 1921, she sailed from Plymouth to Le Havre where the body of the First World War American Unknown Soldier was received on board with full military honours for return to the United States and its final resting-place in Arlington National Cemetery in Washington D.C.

Her subsequent preservation was the result of a successful campaign by a group of private citizens who formed the Cruiser Olympia Association. She was opened to the public in 1957. Bronze plaques, suitably inscribed, record the first shot fired at the Battle of Manila Bay (the right-hand 8-inch gun), and record the location where the Unknown Warrior's casket was placed for the voyage to America.





Centre: The cruiser Olympia preserved at Philadelphia. Right: The American Unknown Soldier of WWI, chosen from four unknown US soldiers of that war, is carried aboard Olympia at Le Havre.

# WRECKOLOGY IN HOLLAND

by Lieutenant-Colonel A. P. de Jong, RNethAF

In December 1975, in the South Flevoland polder, a newly reclaimed piece of the former Zuider Zee, a US Army Air Force B-24H Liberator bomber slowly emerged from the mud. The four-engined bomber that had been lost on December 22, 1943, was recovered by the Royal Netherlands Air Force Recovery Unit during a painstaking salvage operation.

The plane was first sighted in the shallow water by a helicopter crew flying one of No. 298 Squadron's Alouettes III from Soesterberg airbase. The RNethAF Recovery Unit was notified and an early investigation was immediately initiated.

Intensive study of the air scene on December 22, 1943, revealed that 579 Eighth Air Force B-17s and B-24s carried out raids on targets at Munster and Osnabruck, from which 22 bombers failed to return. Dutch Air Force archives indicated that 13 B-24s and 6 B-17s of the missing aircraft went down in the Netherlands or its surrounding waters. Careful elimination led to the conclusion that the B-24 was most probably from the 44th Bombardment Group, 66th Bomb Squadron, based at Shipdam airfield in Norfolk. The serial number was supposed to be 42-7638. Back-tracking old USAAF records, it was found that if this conclusion turned out to be true, the chance of finding human remains was high, since five of the ten crew members were still listed as 'missing in action'. The bodies of four others were washed ashore during the war and were buried in Holland. There was only one survivor.

That survivor was 1st Lieutenant Charles Taylor, the co-pilot, who was successfully traced to the small town of Scotch Plain in New Jersey. At an invitation from the Dutch television network NCRV, Lieutenant Taylor

**Top: The lengths the Dutch go to in aircraft recovery is dramatically illustrated in this photo showing the specially-built 800-yard causeway to retrieve Charles Taylor's B-24. Above: April, 1961 — one of the first wrecks investigated, the Wellington Z1204.**

**Major W. Middelkoop after defusing one of the five 500lb bombs found in the wreck of Wellington T2996.**

**The changing shape of Holland. The country is probably unique in being able to increase its size by conquering only the sea. Left, the Zuider Zee as it was in 1945 and, right, the reclaimed areas of polder by 1975.**

came back to Europe last autumn, for the first time since 1945, to visit the site of that fateful event in Holland. The very surprised Taylor assured the Recovery Unit that they had dropped all their bombs and were on their way home to Shipdam when they were forced down into the Zuider Zee at a position roughly 16 miles east-north-east of Amsterdam.

Lieutenant Taylor told viewers what he remembered of the situation. 'After being hit by German flak over eastern Holland, gradually three of the four engines gave up, and seeing we were unable to fly the aircraft back to England, the pilot gave a bale-out order, assuming that we were still flying over land in the overcast. I believe that four of us did bale out before we spotted water below through the bomb-bay doors. It was at this time we all decided we would be better off sticking together and ditching the plane. It turned out the plane hit the water at some 140 miles per hour, stopped almost instantly and began to fill with water. I released my seat belt and floated out of the sinking plane. I thought at the time I had floated through the open escape hatch, but found out during this return visit that it was the side of the cockpit, for the nose had broken away from the fuselage.'

He finally got the dinghy out, but by that time his flying suit was soaking wet and he did not have the strength to pull himself into the raft. His Mae West kept him afloat until the Germans found him, one arm draped over the raft and unconscious. The German anti-aircraft boat took him to Amsterdam and he ultimately spent the rest of the war in Stalag I prison camp near Rostock on the Baltic Coast.

'Unbelievable, unbelievable,' were his only comments as eyewitness of the RNethAF's recovery operation of his own Liberator.

A few days after Charles Taylor left for the United States, the remains of his less lucky crew-mates were found. The men, who had braced themselves behind the armour plate, had no way of escape. On impact, the armour plate buckled and blocked the escape hatch, their only way out. . . .

But nevertheless, another five names could be removed from the 1200 USAAF air-crew names on the 'Missing list—Holland', and the 115th aircraft wreck was added to the list of those recovered by the RNethAF since 1960.

The rather strange and unique RNethAF 'Operation Harvest' started back in 1960. It had taken some time for the authorities to realise the strange harvest they were to reap in the reclamation of the first post-war Zuider Zee polder, Eastern Flevoland in 1958. Shortly after the dykes had been closed, the wreckage of a RNethAF Gloster Meteor T-7 (serialled I-301) was found. This aircraft had been missing since March 17, 1954. The RNethAF Recovery Unit was called in to remove the remains of the Meteor. The muddy swamp, covered with reeds, did not permit the use of heavy motorised salvage equipment, and the digging had to be done by hand.

During this first salvage operation, complaints were received at the local Police post about a group of Boy Scouts who spent the evening hours working on and firing aircraft machine guns. These machine guns turned out to have been taken from another aircraft wreck. During their excursions through the fresh polder, then still a sort of no-mans land, the boys had found the remains of a twin-engined bomber close to the Kamperdijk, the northern dyke of the polder. They had taken the undamaged tail-turret machine guns from it and some 700 rounds of ammunition.

Later examination led to the identification of the aircraft: Wellington serial number Z1204 of No. 301 (Polish) Squadron RAF, which was shot down by one of Germany's night-fighter aces, Oberleutnant Egmont Prinz zur Lippe of II/NJG2 on July 3, 1942 at 01.09 hrs over the Zuider Zee.

The Police resident's reports started a chain of events, ending up in the Dutch Government's ministries in The Hague. There it was decided that the proper removal of the dozens of war-time aircraft anticipated in the newly-reclaimed areas had to be considered a state responsibility, and procedures were set up for efficient and professional recovery of what was expected to be found in the future. The Air Force, being an organisation with an existing salvage unit for present-day crashes and having the right equipment and experienced personnel for the task, were given an additional mission: 'Operation Harvest of the Zuider Zee'.

A system was developed in which the RNethAF could co-operate with the Air Force explosives demolition unit and the Army graves service for cases where human remains or explosives were found.

During the first year of these activities, in the area from which the Meteor wreckage was cleared, four more aircraft were found and excavated. Among them were two fighters (a Bf-109 and a Spitfire) and two four-engined bombers (a Lancaster and a B-17). The Lancaster, serialled DS794 of No. 426 Squadron RCAF, based at Linton-on-Ouse, turned out to have its bomb-load still on board; the remains of some of the crew-members were also unearthed and given a proper burial after identification.

During the following years, several more warplane wrecks were recovered, such as Bf-109s and 110s, Spitfires, Whitleys, Stirlings, Lancasters, Mosquitoes and American B-17s and B-24s. In general, identification of the aircraft was not a difficult problem, but in a few cases it was not so easy.

Such was the case which was reported to Lieutenant-Colonel A. P. de Jong, RNethAF, whilst the Unit was working on the recovery of Lancaster ED357 of No. 12 Squadron in August 1963. A local tractor driver arrived at the salvage pit to report having found some rusty, old bicycle-type wheels on a strong axle, 'probably parts of a very old-fashioned aeroplane'. Driven by curiosity, the team made a rapid survey of the location.

The remains of an old undercarriage were the first clues, indicating that this was not just another WWII case. Some ten yards from the wheels, a honey comb engine cowling was located; pieces of heavy copper and iron wire were found in several places.

Digging brought new discoveries: first, a heavy copper fuel tank of rectangular construction, and then a smashed-up instrument panel. An almost undamaged .30-calbre machine gun came to light, inscribed: 'Parabellum Berlin 1913'. Near it was a circular ammunition drum, made in 1916, with dozens of relatively well-preserved bullets. Other finds soon followed, including a 'Napoleon-type' Very pistol with four flares, and even tyres which, although damaged, were in unbelievably good condition after all those years.

By comparing constructional details and dimensions with silhouettes and construction drawings of WWI aircraft, the wreck was identified as a German Gotha G-IV 'Riesenbomber' (Giant bomber), the type that undertook a number of raids on London in 1917 after heavy Zeppelin losses forced the Germans to switch to bombers.

RNethAF historical files disclosed that, as far as was known, only one aircraft came down in the Zuider Zee during World War I. The official diary stated: 'On October 13, 1917, a heavy German bomber crashed into the Zuider Zee, some ten miles south of the island of Urk. A few parts were fished up on October 20, transported to Soesterberg airfield for examination. They belonged to a Gotha G-IV bomber and were of no use to our air force . . . '

## SUMMARY OF AIRCRAFT RECOVERED BY THE RNethAF SINCE 1960

**Legend—Recovery Code:** 1 wreck recovered; 2 human remains recovered; 3 bombs/explosives recovered; 4 parts only recovered; 5 wreck location established, but recovery impossible or not necessary

| Date | Location | Type | Serial No. | Unit | Base | Crash Date | Code |
|---|---|---|---|---|---|---|---|
| Apr. '60 | East Flevoland | Meteor T-7 | I-301 | RNethAF | Soesterberg | 17-3-54 | 1 |
| Aug. '60 | East Flevoland | Lancaster | | | | | 1 |
| Aug. '60 | East Flevoland | Spitfire | | | | | 1 |
| Aug. '60 | East Flevoland | Bf-109 | | | | | 1 |
| Sept. '60 | East Flevoland | Lancaster II | DS 794 | 427 Sqdn. | Linton-on-Ouse | 15/16-2-44 | 1, 2, 3 |
| Apr. '61 | East Flevoland | Wellington IV | ZI204 | 301 Sqdn. | | | 1 |
| June '61 | East Flevoland | Hampden | AT-101 | 408 Sqdn. | Balderton | 1/2-6-42 | 1 |
| July '61 | East Flevoland | Ju-88 | 550283 | 2/KG4 | Soesterberg | 4-2-44 | 1 |
| Aug. '62 | East Flevoland | Bf-110 | | | | | 4 |
| Sept. '62 | Amsterdam | Lancaster | R5512 | 97 Sqdn. | Woodhall Spa | 20-12-42 | 1, 2 |
| Nov. '62 | East Flevoland | Bf-109G | | 5/JG1 | Soesterberg | 29-11-43 | 1, 2 |
| July '62 | East Flevoland | Lancaster | ED357 | 12 Sqdn. | Wickenby | 11/12-6-43 | 1 |
| Aug. '63 | East Flevoland | Gotha G-IV | | BG-III | | 13-10-17 | 1, 3 |
| Sept. '63 | East Flevoland | Mosquito | | | | 1944 | 4 |
| July '64 | Lobith | Bf-110G-4 | | | | 25-5-44 | 2, 4 |
| Aug. '64 | Kuinre | Halifax | HR878 | 35 Sqdn. | Gravesley | 31-8-44 | 4 |
| Sept. '64 | Opheusden | Stirling | V8-H | 570 Sqdn. | | 18-9-44 | 2, 4 |
| May '65 | Zwolle | Spitfire | RR229 | 127 Sqdn. | Grimbergen | 28-11-44 | 1, 2, 3 |
| Sept. '65 | IJsselmeer | P-38J | | | | 15-4-44? | 1 |
| Nov. '65 | IJsselmeer | Stirling | BF383 | 90 Sqdn. | Ridgewell | 27-4-43 | 1, 4 |
| June '66 | Hoogerheide | He-111H-6 | 3558-1039 | III/KGr 126 | | 12-5-40 | 1, 2, 3 |
| June '66 | Buggenum | Whitley | | 78 Sqdn. | | 17-8-41 | 4 |
| June '66 | IJsselmeer | B-17F | 42-37719 | 381 BGr | Ridgewell | 11-1-44 | 4 |
| June '66 | IJsselmeer | B-24 | | | | | 4 |
| Oct. '66 | Zwaagdijk | Wellington Ic | T2996 | 103 Sqdn. | Newton | 12/13-6-41 | 1, 2, 3 |
| June '67 | East Flevoland | Stirling | BF353 | 15 Sqdn. | Mildenhall | 16/17-9-42 | 1, 2 |
| Aug. '67 | East Flevoland | Halifax | HR731 | 51 Sqdn. | Snaith | 25/26-6-43 | 4 |
| Aug. '67 | Rozenburg | Blenheim I | L9189 | 235 Sqdn. | | 12-5-40 | 4 |
| Aug. '67 | Rozenburg | Halifax V | DK135 | 427 Sqdn. | Leeming | 24/25-6-43 | 1, 2, 3 |
| Oct. '67 | East Flevoland | Wellington Ic | T2702 | 15 Sqdn. | Wyton | 10/11-2-41 | 2, 4 |
| Oct. '67 | Genemuiden | FW-190 | 170009 | 2/JG26 | Wevelghem | 8-4-44 | 1, 2 |
| March '68 | Smilde | B-17 | | | | ?-3-44 | 4 |
| March '68 | East Flevoland | F-84F | P150/184 | RNethAF | Eindhoven | 17-7-58 | 4 |
| March '68 | East Flevoland | B-17GSH | 42-3486 | 482 BGr. | Alconbury | 11-1-44 | 1, 2 |
| June '68 | Zwartemeer | Lancaster II | LL684 | 514 Sqdn. | Waterbeach | 22/23-3-44 | 4 |
| Aug. '68 | East Flevoland | F-84G | K-139 | RNethAF | Eindhoven | 12-11-53 | 4 |
| Sept. '68 | Tiel | Bf-110 | | 2/NJG1 | | 3-2-43 | 5 |
| Sept. '68 | St. Oedenrode | Bf-109 | | | | ?-9-44 | 5 |
| Oct. '68 | Barendrecht | Ju-88G-7a | | 5/NJG3 | | 13/14-1-45 | 1, 2 |
| April '69 | IJsselmeer | Stirling | | | | | 4 |
| July '69 | North Sea | Spitfire | | | | | 4 |
| Aug. '69 | Noorderleeg | Bf-109 | 15841 | 9/JG1 | Leeuwarden | 16-7-43 | 5 |
| Sept. '69 | North Sea | Halifax | | | | | 4 |
| Sept. '69 | IJsselmeer | F-84F | P150/184 | | | 17-7-58 | 4 |
| Sept. '69 | North Sea | RAF engines | | | | | 4 |
| Sept. '69 | North Sea | Luftwaffe | F-104 | Mar. Fl. Gs2 | Eggebeck | | 4 |
| Oct. '69 | North Sea | Halifax | | | | | 4 |
| Oct. '69 | Holl. Diep | B-17F | 42-30852 | 381 BGr. | Ridgewell | 5-11-43 | 4 |
| Dec. '69 | Den Helder | Stirling | W7474 | 218 Sqdn. | Marham | 3/4-6-42 | 4 |
| Dec. '69 | North Sea | Lockheed C-130 | | USAF | | | 4 |
| March '70 | West Rozenburg | Ju-88G-6c | 620582 | 9/NJG1 | | 1-1-45 | 4 |
| April '70 | North Sea | F-104 | | Luftwaffe | | | 4 |
| May '70 | North Sea | Lancaster | | | | | 4 |
| May '70 | Dollard | B-17F | | 94 BGr. | | 11-12-43 | 4 |
| June '70 | South Flevoland | F-84F | P-163 | RNethAF | Eindhoven | 1-4-59 | 4 |
| July '70 | South Flevoland | P-51D-5NA | 44-13411 | 4 FGr. | Debden | 20-11-44 | 1 |
| Aug. '70 | South Flevoland | B-17G | 42-30280 | 482 BGr. | Alconbury | 21-2-44 | 1 |
| Sept. '70 | North Sea | F-104 | | Luftwaffe | | | 4 |
| Oct. '70 | North Sea | F-84F | P-212 | RNethAF | Eindhoven | 8-6-70 | 4 |

| Date | Location | Type | Serial No. | Unit | Base | Crash Date | Code |
|---|---|---|---|---|---|---|---|
| Dec. '70 | North Sea | P-47 | | | | | 4 |
| Dec. '70 | Noordschans | Wellington | | 426 Sqdn. | Dishforth | 12/13-5-43 | 5 |
| Feb. '71 | Volkerak | Stirling | BF519 | 218 Sqdn. | Downham Mkt. | 31-7-43 | 4 |
| March '71 | North Sea | Harrier | | RAF | | | 4 |
| April '71 | East Flevoland | Stirling | BF353 | 15 Sqdn. | Mildenhall | 16/17-9-42 | 4 |
| April '71 | North Sea | F-84F | P-212 | | Volkel | 8-6-70 | 4 |
| May '71 | Rottumerplatt | Halifax | | | | | 4 |
| May '71 | North Sea | Beaufighter | | | | 1944 | 4 |
| May '71 | Giethoorn | P-38 | | 20 FGr. | | 29-2-44 | 4 |
| June '71 | Europoort | Lancaster | ND579 | 166 Sqdn. | Kirmington | 21/22-5-44 | 4 |
| June '71 | North Sea | Wellington | | | | | 4 |
| July '71 | Ouddorp ZH | B-17G | 43-38131 | | | 5-4-45 | 4 |
| July '71 | Ameland | Do-18D | | | | ?-11-39 | 4 |
| Aug. '71 | South Flevoland | Meteor IV | I-39 | RNethAF | Soesterberg | 4-4-57 | 4 |
| Aug. '71 | South Flevoland | Bf-110G-4 | 5477 | 7/NJG1 | Twenthe | 29-9-43 | 1 |
| Sept. '71 | East Flevoland | Ju-88 | 550283 | 2/KG4 | Soesterberg | 4-2-44 | 4 |
| Sept. '71 | South-Flevoland | F-84F | P-163 | RNethAF | Eindhoven | 1-4-59 | 1 |
| Oct. '71 | Wouw NBr. | V-1 | | | | | 4 |
| Oct. '71 | South Flevoland | Lancaster | | | | | 4 |
| Nov. '71 | Markerwaard | B-24 | | | | | 4 |
| Dec. '71 | Lonneker | Typhoon | PD 473 | 266 Sqdn. | Deurne | 1-4-45 | 4 |
| Feb. '72 | Rilland Bath | Wellington Ic | R1213 | 103 Sqdn. | Elsham Wolds | 29-8-41 | 3, 4 |
| March '72 | North Sea | Lancaster II | | | | | 4 |
| April '72 | South Flevoland | Hunter | N-154 | RNethAF | Woensdrecht | 16-6-60 | 4 |
| April '72 | North Sea | Merlin eng. | | | | | 4 |
| May '72 | Roptazijl | Wellington | BK432 | 429 Sqdn. | East Moor | 21-1-43 | 4 |
| June '72 | South Flevoland | Stirling | BF523 | 90 Sqdn. | Ridgewell | 12/13-5-43 | 1, 2 |
| Aug. '72 | IJsselmeer | Lancaster | | | | | 4 |
| Aug. '72 | Barendrecht | Spitfire XVI | SM473 | 603 Sqdn. | | 17-3-45 | 4 |
| Sept. '72 | Opperdoes | Wellington Ic | R1326 | 218 Sqdn. | | 12/13-3-41 | 4 |
| Oct. '72 | Doetinchem | Spitfire XVI | RM812 | 2 Sqdn. | | 18-3-45 | 4 |
| Feb. '73 | West Rozenburg | B-26 Marauder | | 322 BGr. | Bury St. Edmunds | 17-5-43 | 4 |
| March '73 | Marknesse | Lancaster | JA702 | 156 Sqdn. | Warboys | 30/31-1-44 | 4 |
| May '73 | Babberich | Blenheim | | 57 Sqdn. | France | 14-4-40 | 4 |
| May '73 | Het Volkerak | P-47C | 416583 | 353 FGr. | Metfield | 5-11-43 | 4 |
| June '73 | South Scharwoude | Wellington Ic | | | | 12-11-40 | 4 |
| June '73 | Europoort | Typhoon | | | | | 4 |
| June '73 | South Flevoland | Ju-88S-1 | 300494 | I/KG 66 | Soesterberg | 21/22-4-44 | 1 |
| Aug. '73 | Haamstede | B-24H | 14 50697 | 93 BGr. | Hardwick | 5-4-45 | 1, 3 |
| Aug. '73 | Het Volkerak | P-47C | 416583 | 358 FGr. | Metfield | 5-11-43 | 1 |
| Aug. '73 | Twenthe Air B. | Spitfire | | | | 1945 | 1 |
| Sept. '73 | Paterswolde | Hampden | AE185 | 50 Sqdn. | Skellingthorpe | 17/18-8-41 | 5 |
| Oct. '73 | Kropswolde | Lancaster | DS788 | 408 Sqdn. | Linton-on-Ouse | 20/21-2-44 | 4 |
| Nov. '73 | De Peel | Lancaster | | | | 44/45 | 4 |
| March '74 | Schiermonnikoog | Halifax | BB252 | 10 Sqdn. | Melbourne | 10-1-43 | 4 |
| March '74 | Den Hout | B-26B | 4131644 | 386 BGr. | Great Dunmow | 22-2-44 | 4 |
| May '74 | South Flevoland | He-115 | | | | 40/41 | 4 |
| Aug. '74 | South Flevoland | He-115 | 2218 | 3/906KF1Gr. | Schellingwoude | 2-9-40 | 1 |
| Aug. '74 | Andijk | Wellington Ic | T2612 | 300 Sqdn. | | 25/26-6-42 | 4 |
| Aug. '74 | Urk | Sikorsky S-61 | | CAF | | 1974 | 4 |
| Aug. '74 | Giethoorn | P-38J | | 20FGr. | Kings Cliffe | 29-2-44 | 4 |
| Aug. '74 | Lauwersoog | Beaufighter | | | | 1944 | 4 |
| Aug. '74 | Lauwerszee | Halifax | | | | | 4 |
| Oct. '74 | Giethoorn | P-38J | 42-67404 | 20 FGr. | Kings Cliffe | 29-2-44 | 1 |
| Nov. '74 | IJsselmeer | Propeller only | | RAF | | | |
| Jan. '75 | Off Vlieland | Beaufighter Mk Ic | | RAF C.Cd. | | 1942/43 | 4 |
| Jan. '75 | Oosterbeek | Bf-109G-6 | | | | 1944 | 4 |
| Feb. '75 | Waddenzee | Wellington | X3279 | 150 Sqdn. | Snaith | 6/7-6-42 | 4 |
| April '75 | South Flevoland | Hunter | | RNethAF | | | 4 |
| April '75 | Epse | Wellington | | 150 Sqdn. | Snaith | 9/10-8-42 | 4 |
| Sept. '75 | Oude Tonge | Fw-190 | | 10/JG2 | Corneilles | 22-2-44 | 1 |
| Sept. '75 | Oostburg | B-26 | | | | ?-5-45 | 1, 2 |
| Dec. '75 | South Flevoland | B-24 | 42-7638 | 44 BGr. | Shipdam | 22-12-43 | 1, 2, 3 |

**Four stages in the recovery of an aircraft from the old Zuider Zee. When the dykes around the newly reclaimed area have been closed, the water is pumped out — the wreck comes to light . . .**

**. . . Months later, when all the water has been sucked out and the ground has dried, the investigation continues. This is the same B-17 Fortress . . .**

**. . . Prior to actual recovery, the reeds are burned off and metal locator surveys taken to confirm the extent of the wreck to be exposed . . .**

**. . . When the dry land is firm, mechanical equipment can be used to lift the remains. Here a B-17 wheel and punctured tyre are hoisted by crane to be taken to the Recovery Unit's base.**

As mentioned earlier, the recovery programme began for practical purposes, to disarm and remove potentially hazardous munitions and obstructive debris. But as it continued, each wreck retrieved and meticulously researched, added another footnote to WWII history. More important, it often led to the discovery of the ultimate fate of crew members still listed as 'missing in action'.

Holland was an aerial front-line during WWII. British and US formations crossed German-occupied Holland almost daily to attack targets in Germany. For that reason, the Germans concentrated heavy air defences in the Netherlands, trying to destroy as many of the attackers as possible before they could reach Germany. This resulted in so many Allied and German aircraft crashing in a relatively small area; some 7000 altogether, of which 3500 were British, nearly 2500 German and roughly 1200 American. Estimates are that between 500 and 700 of these aircraft fell into the Zuider Zee.

Generally, a recovery starts by setting poles to mark suspect spots indicated by the metal detector. First components recovered often render an indication of the type of aircraft, and with long experience even the smallest nuts and bolts can help in the process of elimination to determine nationality and type. At the same time, wartime files can help to confirm if the identification is correct and whether the aircraft was en route to target with bombs on or on its way home.

Missing lists are consulted to determine whether human remains are likely to be expected. When the last metal parts have been recovered, using cranes, spades, or even by hand, all the debris are sent to the Gilze Rijen airbase, the station where the RNethAF Recovery Unit is based, for final investigation. All significant parts are retained for institutes such as the Dutch, British, German or US Air Force museums, while other parts go to the aerospace research laboratories for scientific research and quality control.

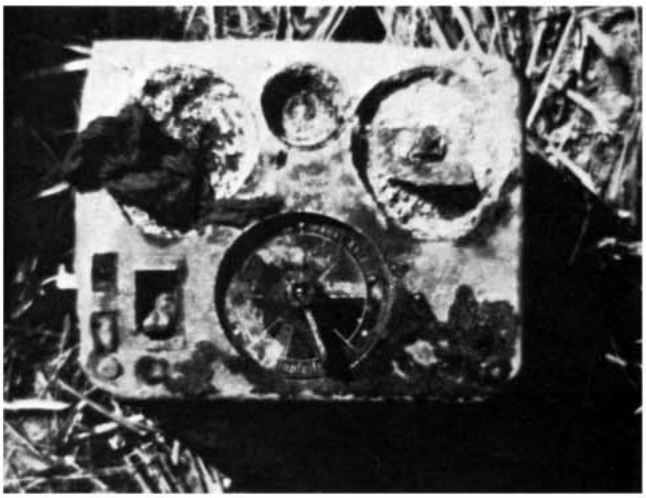
**Final proof of identity — the serial plate of the Fortress missing since February 21, 1944 — what was a mystery is now part of history.**

Year after year 'Operation Harvest' continues. In 1975, some eight WWII aircraft wrecks were recovered. Among them were parts of a Coastal Command Beaufighter Mk-Ic, a Bf-109G-6 and a FW 190 of 10/JG2, and two Wellingtons, both having belonged to No. 150 Squadron based at Snaith.

One of them went down on the night of June 6/7, 1942 as a victim of the Luftwaffe's night-fighter ace Oberleutnant Becker of II/NJG2, the other was shot down by the equally famous German NJG1 pilot, August Geiger, on the night of August 9/10, 1942. Geiger himself did not survive the war. He was shot down on September 29, 1943 over the Zuider Zee . . . The wreckage of his Bf-110G-4, coded G6+ER (7/NJG1), Werkenummer 5477, went to the bottom of the sea. There it remained until the Unit found the Messerschmitt night fighter and recovered it in August 1971. The two rudders carried 53 painted kill markings, one of which indicated the 150 Squadron Wimpey, which was to be found four years later . . . One of the tail fins of Geiger's Bf-110 is now on display at the RNethAF museum at Soesterberg airfield.

To date, the last of the many was Charles Taylor's Liberator 42-7638. To get this plane out of the mud, an 800-yard causeway had to be built from the dyke, and two Leopard salvage tanks were brought to drag out the complete wing and broken fuselage. The paint on the wing, which was not supposed to last for more than a few years, turned out to be in fine shape after more than thirty.

**The fin from the German Junkers Ju-88 bomber of 2/KG4, No. 550283, shot down on February 4, 1944 over the Zuider Zee, recovered from Eastern Flevoland in September, 1971.**



**The long-range radio transmitter found in the same wreckage. The Dutch Air Force has a unique task in investigating the five to six hundred aircraft believed to have crashed in the Zuider Zee.**

The bodies found in the cabin were in good enough condition to make identification possible. Working carefully, the mud was removed from the plane's interior in small pails. This was then screened through a sieve. A pilot's ring and watches were found, together with 'dog tags'. A wad of gum was found in an ashtray. The plane's guns were in excellent condition and live ammunition was recovered. Some of these guns were retained to be used in the conversion of some ex-RNethAF T16 Harvards, to be used as WWII fighter aircraft in the forthcoming motion picture 'A Bridge Too Far'.

Only one part of the Liberator did not find its way to a museum or research institute; it was given to Charles Taylor. The Unit thought he should have the wheel he was holding when the plane hit the water. And Taylor was only too glad to accept . . .

**Centre: A Bristol Hercules radial engine from Stirling BF523 lost in May 1943 and uncovered nearly thirty years later. Right: Royal Netherlands Army Grave Service personnel investigate human remains.**

AFTER THE BATTLE

## UNITED KINGDOM

# THE SECRET UNDERGROUND RAILWAY EXECUTIVE H.Q.

From the public viewpoint the Railway Executive Committee came into being on September 1, 1939, as the agent of the Minister of Transport for the purpose of giving directions under the Railway Control Order, 1939, when the Government assumed control of the main-line railways. Beginning on the following day, the name 'Railway Executive Committee' was seen throughout the country as the signatory to Orders announcing curtailments of services and facilities. It was noteworthy that neither these announcements nor any subsequent statements ever contained an address, and the note-paper of the R.E.C. continued to be no more specific than to state 'London, S.W.' and to give one of the telephone numbers of the Railway Companies' Association. This specially-arranged postal address did not even supply the correct postal district of the R.E.C. Headquarters, and the telephone number gave not the slightest indication of the location.

As a 'shadow' advisory committee, the R.E.C. was formed at the time of the Munich crisis, on September 24, 1938, and during the next 11 months it undertook a vast amount of preparatory work and appointed 15 consultative committees.

When the Railway Executive Committee was created, it was visualised (as indeed the title indicated) that this committee would assume important executive functions in the event of Government control of railways in war conditions. Thus, the need arose for

**Top: Down Street underground station, photographed prior to its closure in 1932 when it was replaced by Green Park Station. Above: Few people would realise today that the door in the bricked-up entrance hides a secret wartime headquarters.**

adequately-protected headquarters to be provided, from which the R.E.C. could operate even during severe aerial bombardment.

The original scheme was to strengthen the basement of Fielden House, 10 Great College Street, Westminster, S.W.1—the headquarters of the Railway Companies' Association since October 1937. The owner of this building was Lineside Estates Limited (a subsidiary of the London Midland and Scottish Railway), and Mr. W. K. Wallace, Chief Engineer of the L.M.S.R., therefore examined the basement of Fielden House. He found, however, that to make a satisfactory job of strengthening this in such a way as to make it suitable for use as the R.E.C. headquarters would be very expensive, owing to the levels of the basement in relation to high water in the adjacent River Thames, and the location of water mains and sewers close at hand. Mr. Wallace advised against the proposed alterations at Fielden House, and suggested that a more suitable location be found.

On March 17, 1939, Mr. Cole Deacon conceived the idea of using a disused tube station for the offices of the Committee, as this would provide adequately-protected accommodation for the Members of the Committee and the staff in which to work, eat, and sleep, and safely house the important telephone system. That afternoon, after discussing the idea with Sir Ralph Wedgwood, he approached Mr. Frank Pick, who offered the old Down Street underground station on the Piccadilly line, disused since the opening of Green Park in 1932, and within a couple of hours furnished plans of the area available for conversion. That evening Mr. Cole Deacon sketched the layout of the offices, etc., on these plans and sent them to Mr. Wallace. The next morning, March 18, Sir Ralph Wedgwood and Mr. Cole Deacon inspected the site by candlelight.

By Monday, March 20, Mr. Wallace had prepared plans for the conversion of this station and these were submitted to the R.E.C. at its meeting that morning. The scheme was approved, and Mr. Wallace was requested to proceed with it; he immediately conferred with Mr. V. A. M. Robertson, Chief Engineer (Civil), London Transport. After Mr. Wallace and Mr. H. J. Green, Assistant Chief Engineer (Civil) of London Transport had visited the site, arrangements were made to use the L.M.S.R. experience of the requirements of the work by having the Headquarters planned by its staff (acting virtually as Architects) but executed by London Transport under the direction of Mr. Robertson. The distribution of the task was then agreed in that the London Passenger Transport Board was to carry out all structural work, the installation of a passenger lift, air raid protection, ventilation, and sewage, whilst the L.M.S.R. was to provide and install all fittings, lighting and power, fire-fighting appliances, telephones, and radio.

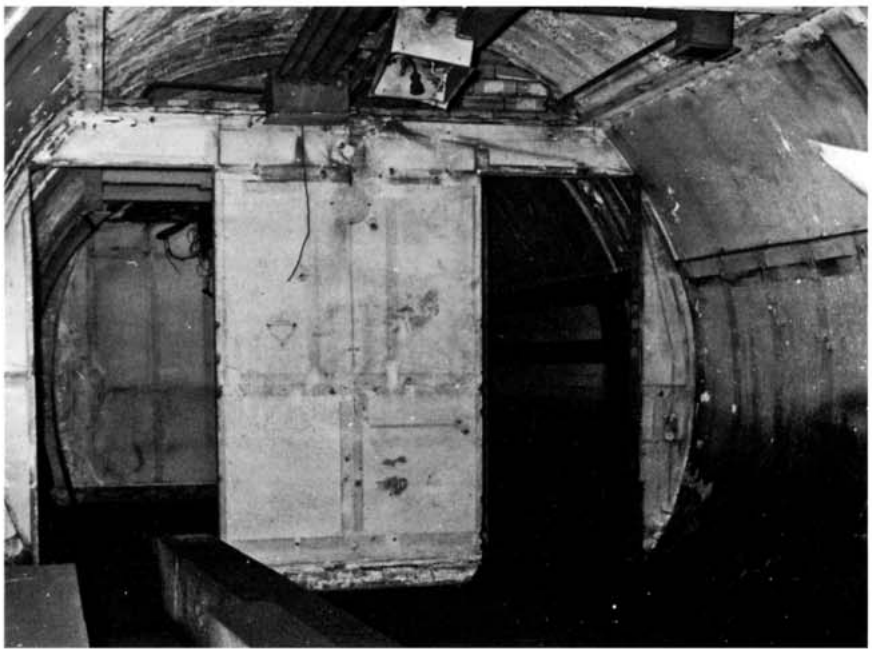
The poltical events at the end of March demanded that the scheme should be pushed forward rapidly, and on April 1 instructions were given for the work to begin. London Transport therefore engaged Sir Robert McAlpine & Sons (London) Limited as contractor for the structural work, and on the same day the various L.M.S.R. Departments began their part.

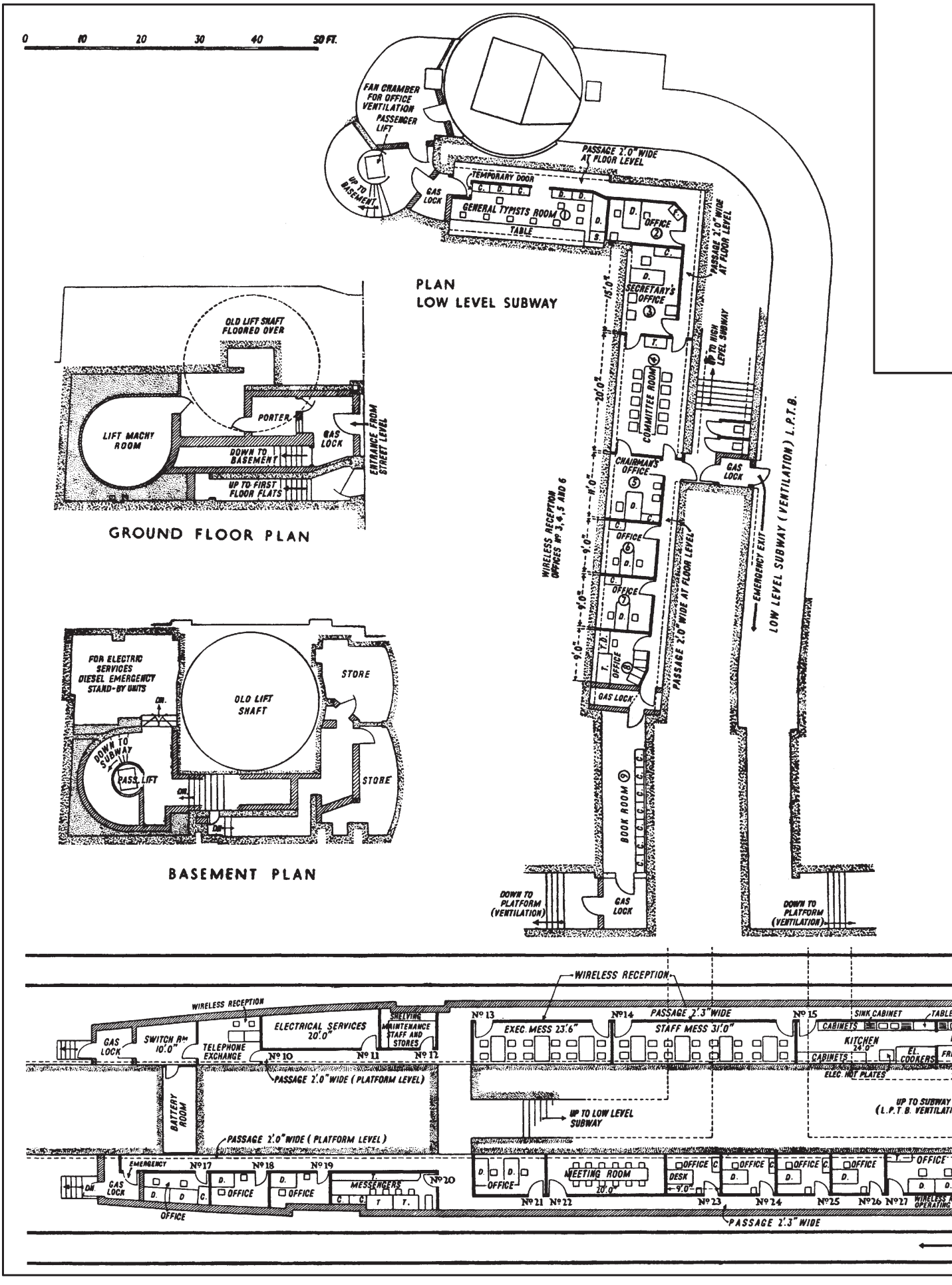
Mr. F. Fawcett, of the L.M.S.R. Chief Engineer's Office, who was responsible for the preparation of the plans, was loaned for this job and he remained on the site until the work was finished.

One of the main problems of the work was that of rigidly restricted widths. The outer shells of the subways were built of the usual circular iron tube segments, and the platform area was limited by the London Transport structure gauge for the tube trains passing along the adjacent running lines. The tube

**Above: The Committee Room under construction. Below: The full Railway Executive Committee in session photographed in January 1940.**

**Bottom: The same room, filthy dirty, hardly living up to its historic past; Winston Churchill's War Cabinet met here during the 1940-41 period of intense air raids.**

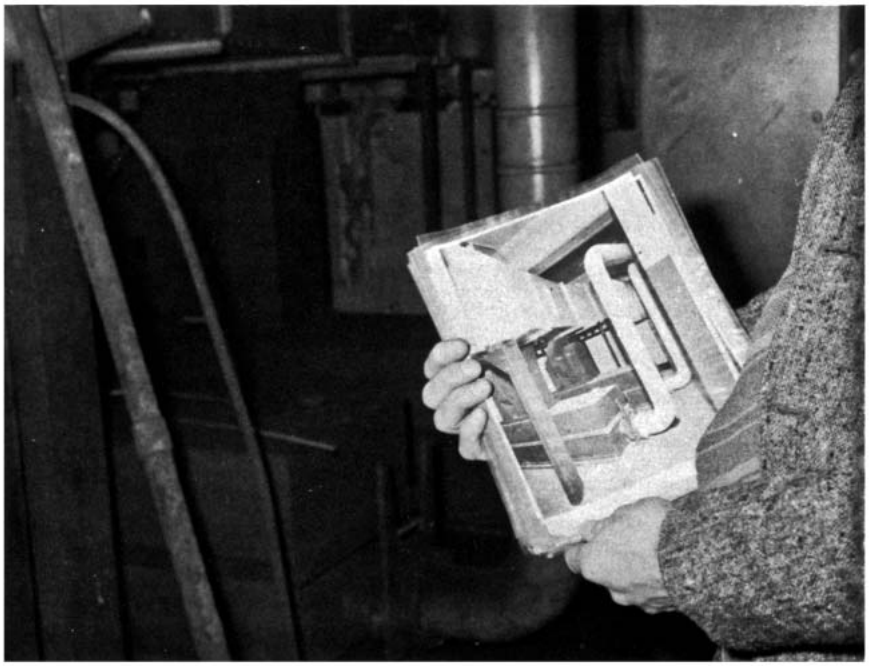



0 10 20 30 40 50 FT.
FAN CHAMBER FOR OFFICE VENTILATION
PASSENGER LIFT
UP TO BASEMENT
GAS LOCK
TEMPORARY DOOR
PASSAGE 2'.0" WIDE AT FLOOR LEVEL
GENERAL TYPISTS ROOM
TABLE
OFFICE
SECRETARY'S OFFICE
PASSAGE 2'.0" WIDE AT FLOOR LEVEL
PLAN
LOW LEVEL SUBWAY
TO HIGH LEVEL SUBWAY
COMMITTEE ROOM
CHAIRMAN'S OFFICE
GAS LOCK
WIRELESS RECEPTION OFFICES Nos 3, 4, 5 AND 6
OFFICE
OFFICE
OFFICE
GAS LOCK
PASSAGE 2'.0" WIDE AT FLOOR LEVEL
EMERGENCY EXIT
LOW LEVEL SUBWAY (VENTILATION) L.P.T.B.
BOOK ROOM
DOWN TO PLATFORM (VENTILATION)
GAS LOCK
DOWN TO PLATFORM (VENTILATION)
OLD LIFT SHAFT FLOORED OVER
PORTER
LIFT MACHY ROOM
GAS LOCK
DOWN TO BASEMENT
UP TO FIRST FLOOR FLATS
ENTRANCE FROM STREET LEVEL
GROUND FLOOR PLAN
FOR ELECTRIC SERVICES DIESEL EMERGENCY STAND-BY UNITS
OLD LIFT SHAFT
STORE
STORE
DOWN TO SUBWAY
PASS. LIFT
BASEMENT PLAN
WIRELESS RECEPTION
WIRELESS RECEPTION
GAS LOCK
SWITCH Rm 10'.0"
TELEPHONE EXCHANGE
ELECTRICAL SERVICES 20'.0"
SHELVING MAINTENANCE STAFF AND STORES
Nº 10
Nº 11
Nº 12
PASSAGE 2'.0" WIDE (PLATFORM LEVEL)
BATTERY ROOM
PASSAGE 2'.0" WIDE (PLATFORM LEVEL)
EMERGENCY
GAS LOCK
Nº 17
Nº 18
Nº 19
Nº 20
OFFICE
OFFICE
MESSENGERS
OFFICE
Nº 13
EXEC. MESS 23'.6"
Nº 14
PASSAGE 2'.3" WIDE
STAFF MESS 31'.0"
Nº 15
SINK CABINET
CABINETS
KITCHEN 24'.0"
CABINETS
EL. COOKERS
ELEC. HOT PLATES
UP TO LOW LEVEL SUBWAY
MEETING ROOM 20'.0"
OFFICE
DESK 9'.0"
OFFICE
OFFICE
OFFICE
OFFICE
OFFICE
Nº 21
Nº 22
Nº 23
Nº 24
Nº 25
Nº 26
Nº 27
PASSAGE 2'.3" WIDE

lines at Down Street are on the same level, and the largest area available was that formerly occupied by the old platforms and connecting passages. The platform spaces were walled-off from the tracks, and the construction of this wall provided one of the major difficulties of the job. It was not possible to allow the contractor to erect a screen between the running tube lines and the site of the new outer wall of the premises, as the valuable inches that would have been required for this temporary screen would have resulted in a serious loss in the planned width of the offices. Consequently, this wall had to be built when tube traffic was not running, namely between about 1.30 and 5 a.m.

Another difficulty was the limited access for materials, which necessitated the job being planned in such a way that structural work farthest from the entrance should be completed first.

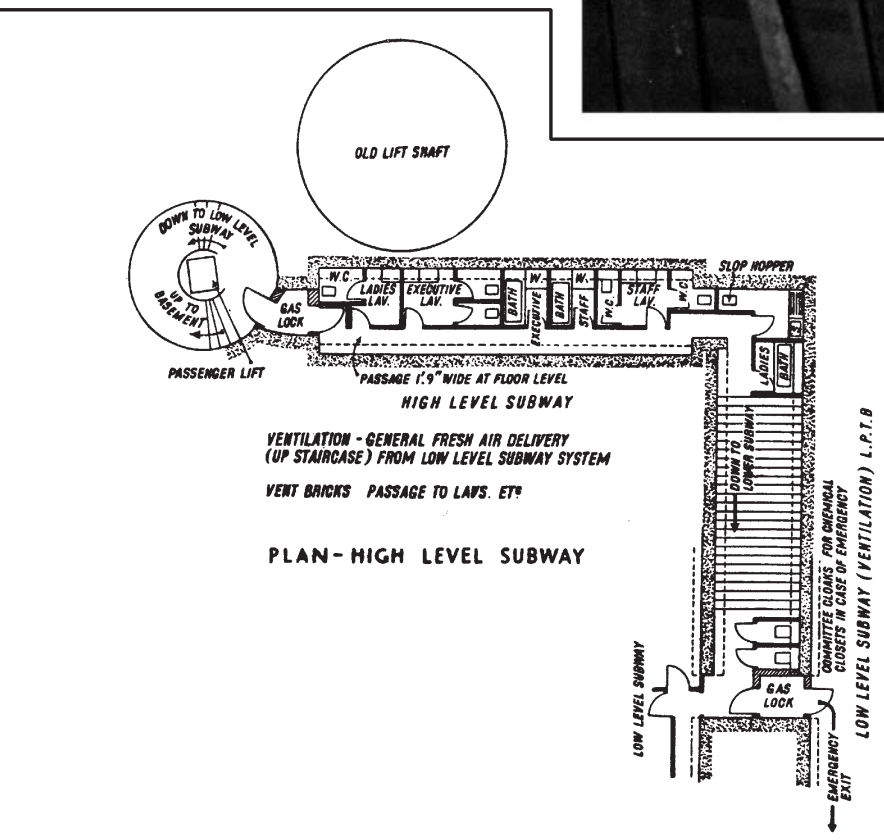
As the main premises were in subways and tube tunnels far below the estimated depth of penetration of any bomb which might be dropped from aircraft, special protection

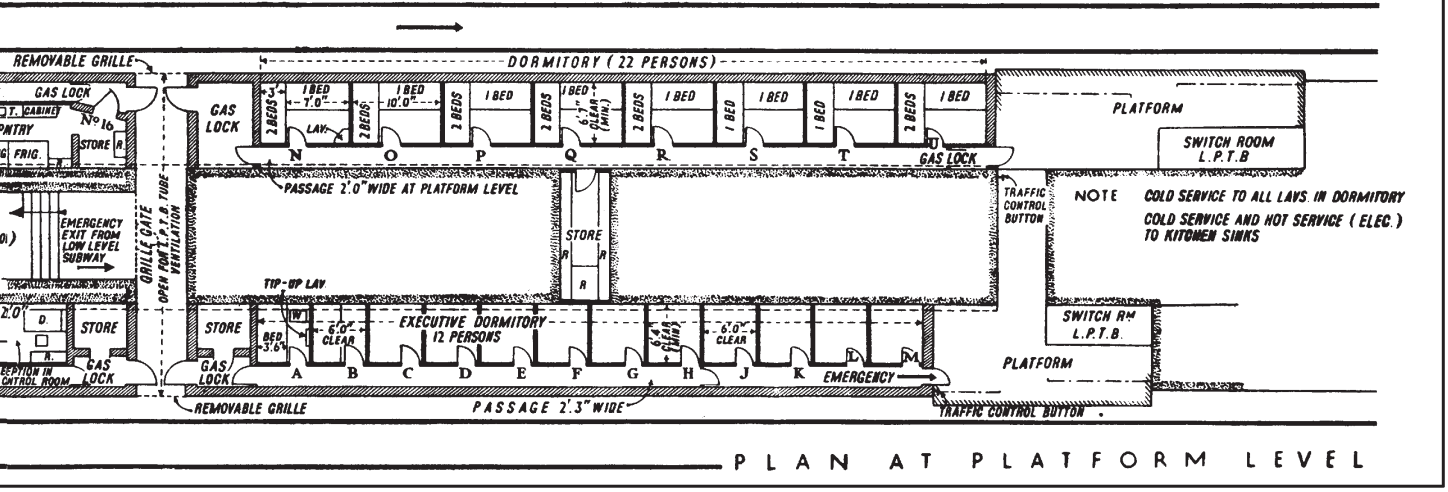


**We were lucky to have a complete set of the photographs of the HQ taken in January 1940; together with this plan, matching the shots was an easy, although very dirty, job. This is the ventilation plant.**

works (other than gas locks) were not considered necessary for the lower levels. The only parts deemed vulnerable were the ground floor at street level, the basement immediately beneath and the lift shafts. A reinforced concrete protective cap was therefore constructed over the stairway and lift shaft. This lift shaft, which since the disuse of Down Street station had had the large lifts removed, had been used for tube ventilation. As it formed part of the ventilation system it required special treatment.

Fresh air was drawn from the atmosphere some 60 ft. above at street level by means of a suction fan at the foot of the old lift shaft, filtered, passed through a thermostatically controlled heater, and also (when necessary) through gas filtration units, and conveyed at pressure to the offices, etc., along ducts arranged in the spaces between the ceilings and floors and the curved surfaces of the tunnels. Final delivery was at, or near, floor level. The spent air was extracted by fans through grills and gratings in the ceilings, and was discharged via non-return flaps to the running tunnels of the London Transport tube trains. Gas locks were arranged at the ends of



every corridor and other connections between the actual R.E.C. premises on the one hand, and the stairway, lift shaft, tube train tunnels, and the ventilation shaft on the other hand.

Special consideration was given to the provision of various means of entry and exit, both for normal working and in emergency, and three methods were available.

Access from the street was provided via the emergency stairway of the former Down Street station, which was equipped with a small lift.

At first it had been intended to give the surface entrance a street number which could be used as the R.E.C. address, but it was subsequently decided to keep secret the location of the headquarters, mainly to reduce the risk of sabotage. Accordingly, special arrangements were made with the Post Office whereby letters to the R.E.C. could be addressed simply 'London, S.W.' and one of the Fielden House telephone numbers was transferred to the emergency headquarters. Thus neither the postal address (which was not even that of the correct postal district) nor the telephone number gave the slightest indication of location.

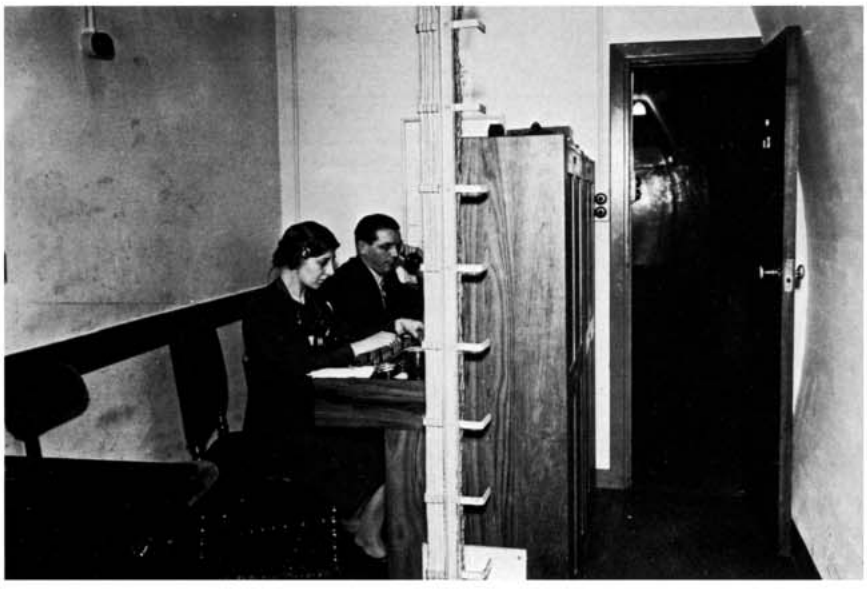
**Left and above: One method of entry was via a lift, installed in the centre of the old emergency stairshaft. The gas lock forms the entrance to the actual offices.**

**Left: The location of the HQ was kept a close secret. This is the spy-hole in the street door. Above: A more secret method of access was via the driver's cab of a tube train. Here, Mr. L. P. Ball leaves the HQ using the small tunnel platform.**

As tube trains passed the platform level of the premises at frequent intervals, short platforms (one for each direction of travel) were arranged at which the trains might make request stops. This method of approach was available normally only to the Members of the R.E.C. and to a few chief officers, but it was capable of being adopted readily for general use if the surface entrance had become blocked. To enable trains to be stopped for boarding at the headquarters, the short platforms were equipped with red signal lights, entirely distinct from the automatic signalling system, which could be actuated by a plunger. These lights were equivalent to an emergency hand signal. Authorised persons then boarded the motorman's cab for conveyance to the next station, where they transferred to an ordinary carriage. Similarly, persons wishing to alight at the headquarters had to travel in the motorman's cab from the previous station.

The third means of access was by walking along the tunnel connections to either Green Park or Hyde Park Corner stations.

**Below: The telephone exchange at platform level showing the curved corridor formed by the tube tunnel. Below right: The editor with Miss Bigel, a London Transport Press Officer, endeavour to make a call.**



*We visited the old Down Street station by special permission in January 1975. It is probably not widely known that, whilst the Cabinet War Rooms were being constructed beneath Whitehall (see issue No. 1), the Railway Executive HQ was used by Winston Churchill and his War Cabinet as a bomb-proof HQ during the heavy raids of 1940-41.*

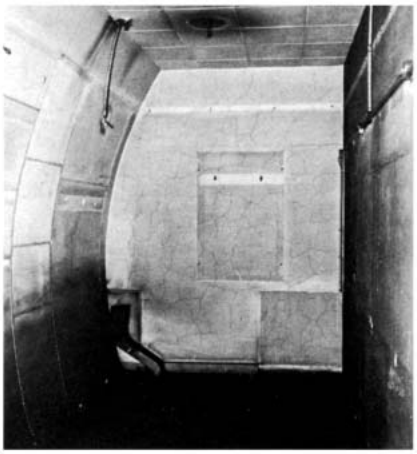
*Soon after the war ended the complex was abandoned and equipment dismantled; over the years, although still inspected every two months, the site has deteriorated further, and today remains in a poor state of repair.*

*The lift installed in the old ventilation shaft has not been run for thirty years but the winding gear is still intact and the engineer told us that there was no reason why it should not work. Electricity is still available at all the points and sockets, only a lack of bulbs made flash pictures necessary.*

*It would have been nice to make our entry via Green Park or Hyde Park stations by travelling in the driver's cab as visitors and staff did years ago, but the stop lights have been dismantled on the small platforms. It was not possible to gain entry to these 'landing stages' because of the danger from passing trains. As it is, the tunnels now act as ventilation shafts and the floor is covered by a thick layer of dirty (not clean) dust. When a train approaches the ram effect produces a wall of air which blows with gale force up the old tunnels raising the dust and giving any visitors a camouflaged appearance to match the surroundings! On this occasion we entered from Down Street itself, through the small door which had served, during WWII, as an emergency exit only, so as to protect the underground secret.*

*We descended, in view of the inoperative lift, down the spiral staircase and then passed through thick steel gas locks to the offices. The plan shows how these were constructed on the old platforms and in the adjoining tunnels. Luckily a railway official, Charles E. Lee, had the foresight to have a magnificent set of photographs taken of the headquarters during its former glory, on Friday, January 5, 1940 and these were kindly made available to the editor. They make a striking comparison to the dirty, derelict state of the rooms exactly thirty-five years later.*

*The editor found the whole construction extremely interesting, especially knowing its historic, secret past. If anyone sees travellers on the underground between Green Park and Hyde Park peering out of train windows at the blackness of the tunnel as they pass the old platforms, they are sure to be readers of After the Battle!*



**Left: The Operations Office, on the platform level, showing maps and rolling stock disposition charts, and above, as it looks today.**

**Centre left: The general typists room in the low-level subway and (centre right) the cluttered room now used for storage. Left: The kitchen was designed similar to that on a main line train. Above: This is how it looks today, stripped of all its fittings.**

# AFTER THE BATTLE

## WAR FILMS

# It Happened Here

What would have happened had the Germans invaded and successfully occupied Great Britain? We know now that in 1940 Britain had a Resistance movement in being, ready to go underground. It is not difficult to speculate that on the other hand, traitors and collaborators would have existed as they did in all the occupied countries of Europe.

In 1956, an eighteen-year-old trainee film cutter, Kevin Brownlow, decided to make a film version of how things may have turned out had a German invasion proved to be successful; it was called, *'It Happened Here'*. The film, finished eight years later, can be regarded as an epic production; not financially, as it was largely paid for out of his own pocket, but despite the barest technical resources and volunteer personnel, who came and went as the shooting went on and on, year after year, the finished result has effectively recaptured the atmosphere of the nineteen-forties in a way in which many large budget films have failed miserably.

In 1956, eleven years after the war ended, London had only just begun to recover and bomb sites were still visible all over the city. The war was not so much a memory as an integral part of the atmosphere. With this as a background, Kevin Brownlow explains how the idea for the film came to him:

'Walking towards the laboratories, I was jolted by a black Citroen screeching to a halt. The driver leaped out and ran to a delicatessen. He paused at the door and shouted to his companion in German. The scene was straight out of a war film; only the surroundings were unusual. The incident triggered a train of thought. What *might* have happened if the Germans had invaded England?'

As an act of encouragement, the editor of *Amateur Cine World* lent Kevin his 16mm camera—the idea was to invade (without permission) the May Day Rally in Trafalgar Square and, by using actors dressed as German soldiers mingling in the crowd, Kevin hoped to obtain a spectacular crowd scene:

'The leading actor, playing a German naval officer, sauntered into the square in search of the leading actress—who had yet to be cast. A Nazi eagle flaring from his jacket, he was followed by three German soldiers, one of them carrying a Schmeisser sub-machine-gun, the other two clutching rifles. To my relief, no one took the slightest notice. It was the hottest day of the year, and the crowds had come more to sun themselves than to listen to speeches. Unfortunately, they were gaily dressed and wreathed in smiles. No one looked sullen or cowed or in any way under duress, which was more than could be said for my extras.

'A group of Danish girls watched our antics. "We knew this was a demonstration," said one, "but we didn't know it was a Nazi demonstration." When one person notices you filming in a crowd, the message is transmitted with telepathic speed. "Take off those boots!" yelled a voice from the balustrade above our heads. "Take off those caps! Go on, take 'em off! We'll have no apeing of Fascists here." A policeman arrived with a Party representative, who accused us of posing the soldiers in front of the banners. We were given no alternative; we had to go.'

After this abrupt end, Kevin knew the scene would have to be done again and this time he asked for, and was granted, permission to film in the square. However, after the second attempt at shooting the rally scene with fifty extras in German uniforms, the news reached the press. Next day the Daily Mail headline screamed 'The Nazis Are Here in a Boy's Film', The Daily Express quoted the Ministry of Works as saying: 'It was due to a complete misunderstanding on our part. We do not allow filming in costume in Trafalgar Square. Had we known it was going to be in Nazi uniforms we should not have granted permission. This is probably the first time anything like this has taken place there—and the last.'

The publicity, in a way, helped Kevin as it brought offers of help with equipment, flags and armbands, but jackboots, tunics and caps were virtually unobtainable. Fortunately at this stage, Kevin met Andrew Mollo (now well-known in his own right as a writer and film maker, but then a sixteen-year-old schoolboy). When Kevin showed the film that had already been shot, Andrew was appalled—the uniforms which had been used were all wrong, with makeshift badges and incorrect collar patches—pure costumiers inventions. It is to Kevin's credit that he accepted the criticism and, with Andrew Mollo as technical adviser, Kevin began again. For film-makers, a fresh start is an almost unknown phenomenon. Too much is at stake in time and money but Kevin admitted to himself that he couldn't live with what had already been shot. However, as the Trafalgar Square scene could not be re-shot, this piece of footage had to stay.

With the new start came a new awareness by Kevin in what, apart from uniform detail, was lacking in his earlier attempts:

'When people become camera-conscious, a strange force takes hold of them. Their faces assume expressions of pain. They hold themselves stiffly, uncomfortably. The first task of a director dealing with non-professionals is to break through the barrier of self-consciousness. It can only be done by making the scene seem real to those taking part. When we realised this simple fact, it changed the style of our film.' Also with Andrew organising the costume department, the possibilities of making an absolutely authentic film seemed dream-like.

The initial joint venture was to shoot the background material for the rally scene. Kevin and Andrew faithfully reproduced German signposts constructed with concrete bases to avoid digging up the roadway! Andrew had tracked down a Kubelwagen in the Cromwell Road which they sprayed field-grey with water paint—taking a gamble on the weather. But when the fifty extras arrived just off Trafalgar Square, not one of them was right for the part of a German officer:

"See if you can find one," Kevin said to Andrew, pointing to the crowded pavements. It was a Sunday, and the congregation was just leaving St. Martin-in-the-Fields. Within a few moments, he had found a tall, blonde, Germanic-looking man, ideal for the part. Bewildered, the man allowed himself to be fitted into uniform and placed in the jeep. They explained what the film was about, and he relaxed. He pulled out a cigar and, conscious of the gaze of the crowd, began to enjoy himself. "Don't let the vicar see me," he said. "I'm an evangelist. I've just delivered the sermon."

The filming went perfectly; although Kevin was a year older than when he started, things looked as if they were really moving. Another piece of luck followed. Andrew knew Mark Dineley, the owner of Bapty & Son, the theatrical weapons-hire agency in London. One evening they showed Mr. Dineley some stills from the film, explaining what they were trying to do.

"You can do some of your battle scenes on

**Top: This is one of the first scenes shot in Trafalgar Square and the only one from Kevin Brownlow's early efforts to appear in the final film. Below: The session at St. Martin-in-the-Fields (William Tobin, well-known militaria dealer beside the Vorsicht sign). Bottom: The 'German' evangelist with cigar, who had just delivered a sermon.**

**Left: Andrew Mollo, on the right, in Berwick St. John. Top: The heavy machine gun sequence with Andrew on the left. Above: An anti-tank gun and crew. All the weaponry came from Mark Dineley's vast collection of militaria, still the major weapons source for film making in Britain.**

my land in Wiltshire," offered Dineley. "I have a farm you can blow up. My tenant only pays £300 a year for it . . . he won't mind."

The Priory, at Berwick St. John, was Mr. Dineley's 15th-century house, full of antiques and rare weapons. It was surrounded by beautiful countryside. Flanking each corner of the grounds were heavy cannon. 'Aimed at the church tower,' explained Mr. Dineley.

On a hillside nearby was a stone chapel, erected by a local dignitary during the 19th century. Inside were stacks of rifles, line upon line of machine-guns, light artillery, Howitzers, anti-tank guns. . . . Armoured cars were stored in cattle-sheds nearby. 'Mr. Dineley's offer of co-operation was the most encouraging thing that had happened to us,' Kevin says. 'With all this at our disposal, we could do anything.'

By the end of the weekend, 1,100 feet, nearly thirty minutes film, was in the can. The most sensational shot, Kevin felt, was one where Andrew, playing an infantryman, was blown up by a S-mine. Also the increasing financial problems of mounting bills for 16mm film were partly solved by Mr. Dineley offering £100 to help subsidise the film.

Filming had to stop during the winter of 1957 but began again in March, 1958, with the completion of the battle scene:

'The session went like clockwork,' remembers Kevin. 'The soldiers moved through the smoke under a hail of Bren-gun fire. I shot this as a series of hand-held tracking shots: soldiers' faces under their helmets, their eyes smarting from the phosphorous smoke, moving steadily forward . . . the Bren-gun firing straight into the lens as the camera gets nearer and nearer. . . .

'The hand-held camera movements were shot on a one-inch lens. This is not a practice advisable for normal production; the slightest jolt is transmitted to the lens and appears on the screen as a blur. But in a battle scene, this is not only acceptable, it is virtually essential. The less steady your camera during scenes of violent action, the more effective the result.

'At the end of the session, my feeling of exhilaration was marred only by uncertainty about the rushes. However, Andrew seemed pleased, and, equally important, so did Mr. Dineley. The morale of the cast was high, and that set the final seal of approval on the session. The rushes were exactly what we'd hoped they would be. The two sessions were cut together and at last we had a battle sequence. It had taken only three days to shoot, although there were some vital pick-up shots of the convoy and explosions before the sequence was complete. But for the first time we had a sequence we could show with neither explanation nor apology.'

During 1958, production of the film slowed and virtually only one scene—the battle sequence—was completed. Although this had taken only six or seven days to film, these days had been spread over more than a year in odd weekends.

(Unfortunately this battle sequence had to be cut from the final film before it was publicly shown to reduce its running time.)

Andrew made forays to France and Germany on the look out for German uniforms and surplus war material. In Dusseldorf, he hit the jackpot when a storekeeper took him into one of the underground air-raid shelters; behind each door were stacks of uniforms, boots and helmets. Prices were gratifyingly low. Financial hopes had also been raised with the possibility of a £2500 grant from the British Film Institute's Experimental Film Fund; when the grant came it had shrunk to £25!

Meanwhile, Andrew had decided to spend a year at a French University. *It Happened Here* came to a grinding halt and it was not until July, 1959, that things got under way again.

By now another important problem had been resolved: the choice of the leading lady. Pauline Jobson, whom Kevin had first met at the beginning of the film, had agreed to play the part of Pauline Murray.

'She had a perfect 1940 face,' says Kevin, 'and we had to give her the same name in the film as all her friends continued to call her Pauline on the set.'

Andrew's return from France was the signal for a trip to New Radnor in Wales, home of Pauline and her husband, Dick, who had already given a lot of advice to the young directors. As it would be difficult for Pauline to travel to Berwick St. John, the village in Wiltshire, it was proposed to continue shooting in Wales. The terrain was not the same, nor the style of building. The surrounding moors, however, had an air of desolation and there was a convenient farm house, Black Yatt, just waiting to be blown up. Kevin agreed to change the location and filming began again on July 4, 1959, with the scene of the shooting of civilians by SS—with Andrew playing the role of executioner!

**Pauline Jobson, with the 1940-style face, who played the leading role.**

As it was too far for Mr. Dineley to travel from Wiltshire, he had to be persuaded to let his son Peter handle the explosives for demolishing the farm.

'When the cast had been transported back to Radnor, we tried to blow up the farmhouse,' says Kevin. 'The first attempt dislodged bricks, but the supposedly fragile chimney remained firmly in place. Finally Peter Dineley put a charge on the end of a broomhandle and stuck it up the chimney. B-o-o-m. No change. "That's the end of the detonators," said Andrew. "I'm full of respect for the way the Welsh built their houses."

New Radnor was also featured in the civilian evacuation sequence. The village was made as drab as possible. The street was littered with debris, curtainless windows were covered with strips of brown paper and the German signs nailed to trees. All the villagers were asked to participate as refugees and were kitted out with original costumes where necessary. With these three important scenes safely on film, 1959 ended a lot happier for Kevin than it had begun.

In contrast the next scene was shot on a demolition site in Camberwell. The area looked just as though it had been blitzed and Kevin selected it for Pauline's walk across London.

'The session was a nightmare,' says Kevin. 'Being a weekend, the demolition site attracted children from all over the district. We saw them from the distance, coming in like locusts, a group on bicycles heading the main swarm. Then they were all over us, jumping, tearing, screaming, thumping, yelling. You tore one away from the camera, and six more took his place. They grabbed rifles from the soldiers. They clambered all over the location. Andrew dashed about, retrieving the bits and pieces that had been stolen, and meting out an occasional backhander. I clung desperately to the camera, wondering how long they would keep this up.

'By the time we finished, the children had wrecked everything in sight, and lost interest in the proceedings. The Light Brigade departed, leaving the area clear for the Heavy Brigade—their older brothers. This was the era of flick knives and Teddy Boys. By the time the gang of youths descended, we had packed our equipment into a room of a deserted house. The youths tried to investigate. Andrew guarded the entrance. There was an argument, a scuffle, and some boys grabbed two Mauser rifles and bayonets. They discarded the rifles but ran off with the bayonets. We hastily transferred everything into the vehicles before anything else happened.'

**Above: A demolition site in Camberwell in South London provided a realistic setting for Pauline's walk across bomb-shattered London, complete with Kevin's signposts . . . except that the local hooligans (photo right) wanted their say as well!**

**Above: Kevin shoots an unfamiliar sight — Wehrmacht troops run to catch a tube at Colindale Underground station, and, below, a German band marches through Chester Terrace beside Regent's Park.**

One of the most effective scenes that looks so authentic on the screen is the 1914 Christmas Truce. This was filmed with a 1922 hand-cranked Kodak camera; the location chosen was Dorset, just after severe floods in January, 1961. Kevin explains how this authenticity was obtained.

'Although this session dealt with an earlier period than the 1940s, we approached it in the same way. We cast each player carefully, ensuring that he had the right period face. This sort of casting is a neglected art; many period films are ruined because of it. Certain faces are right for certain periods, others are wrong. It is something which has to be judged intuitively: there are no rules. In 1914, most

men wore moustaches, so we bought an assortment of false ones. We ensured that all the uniforms were original, and provided the players with Princess Mary's Gift for Soldiers—the royal Christmas present for 1914 was a small tin box, containing cigarettes and sweets. The camera might not pick these up, but they heightened the atmosphere for the soldiers.'

This scene, together with the Trafalgar Square rally sequence, appear as a film-within-a-film, a German documentary complete with Frank Phillips, ex-BBC wartime announcer, giving the commentary. Another scene shows German troops marching past in Parliament Square with Big-Ben in the background.

'A portable speaker broadcast martial music to the troops, in the hope of keeping them in step,' records Kevin. 'Andrew drew up the column of infantry; we had enough for a column of threes. As the band crashed out the opening chords of the *Lippe-Dettmold Marsch,* the column moved forward in perfect step. When our wartime bus, with the *Picture Post* eyes on the front, moved into position, the scene was almost hallucinatory.

'Round the corner, sightseeing on their last day in England, were fourteen officers from a Panzer battalion training at Castlemartin. Hearing the unmistakable strains of the *Lippe-Dettmold Marsch,* they came into the Square to investigate, and were greeted by a column of Wehrmacht infantry. Astounded, the officers inspected our troops, pronouncing them 'absolutely correct'. They were so fascinated that they insisted on accompanying us to the rest of our day's locations.'

The 1936 street-corner riot was also shot in the style of a period newsreel. Kevin explains:

'I instructed Grant Thomson, with a second camera, to stay out of sight while we set up the fight. As soon as he heard it breaking out, he was to come round the corner and grab whatever he could. Meanwhile, I positioned myself on a wall for an establishing high angle with my camera. Like a true newsreel man, I missed the beginning of the fight: the crowd, docile one moment, is struggling furiously the next. I leaped from the wall, the camera still running, and raced into the fight. People barged into me and kocked against the camera, blows were struck which registered as a jarring movement on the film. The clockwork motor ran out and I thought this a good time to regroup. 'Cut!' I yelled. No one took any notice. Some youths continued to kick a policeman they had pulled to the ground.

'All right, STOP!' I screamed. The fight carried on. So I carried on shooting.

'The session was a great success. Thanks to Prince Marshall, publisher of *Old Motor* magazine and a new member of the unit, we spread eleven 1930 vehicles around the location. By accident we stumbled upon the secret of the atmosphere which had pervaded so many of our sessions. Extras were costumed correctly. Wherever they looked they saw vehicles of the correct period, posters, signboards. There was nothing, except the camera, to make them feel self-conscious—and that was out of sight much of the time.'

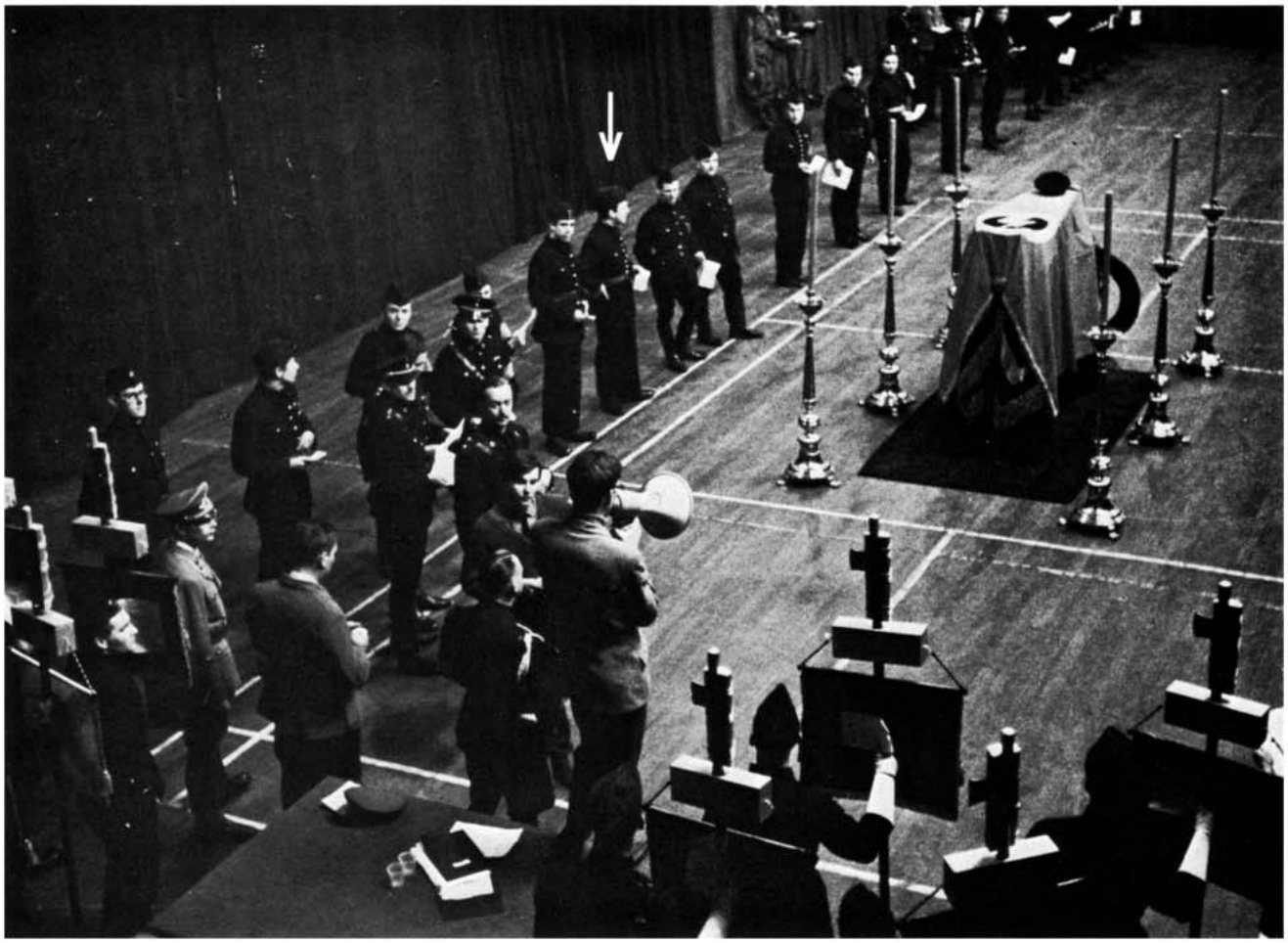
January, 1962, began a new year with increased anxiety over the lack of finance. The first months of the year were spent endeavouring to make up this deficiency and in trying to interest various parties—one being Tony Richardson (director of *A Taste of Honey*). When he was given a showing of the material taken so far he was enthusiastic. The only drawback was the size—16mm. He said that if this would blow up to 35mm without loss of quality, they were in business. The laboratory produced an acceptable print and £3000 to finish the film was soon forthcoming from Woodfall Films. A company was formed, Long Distance Films Ltd., to complete *It Happened Here* on 35mm stock.

The big funeral sequence was staged in the Albany Street Territorial Army drill hall. The complete dressing for this sequence—uniforms, flags, drapes, even the huge silver sword dominating one wall—was made by Andrew, and the entire Mollo family was press-ganged into sewing brassards and buttons on to tunics. A firm of funeral directors supplied a coffin, wreaths and a set of candlesticks last used at King George VI's lying-in-state. The coffin was draped with Fascist flags; behind it was a rostrum, flanked by standards from each country within the British Isles.

With nightfall, the lighting was complete, and the atmosphere impressively Wagnerian. It was too real for one man: he took a swift look inside the drill hall, took off his uniform and fled.

One final sequence remained to be taken: the surrender of the German units, and the little Surrey village of Easthing was the location chosen. Fifty extras in SS uniform were to be boosted by fifty Territorial Army volunteers complete with vehicles. However, when the day arrived, the TA failed to turn up on the set, but Kevin was able to make the numbers

**The riot scene was filmed in Camden Town with the help of Prince Marshall, editor of Old Motor magazine. A 1936 Austin was used for the speakers platform.**



**The funeral scene filmed in a Territorial Army Drill Hall in Albany Street. Roger Bell (our ETO adviser) arrowed, makes his screen debut!**

up by visiting a local approved school. There the headmaster agreed to release fifty Borstal boys for a day. Although the session worked out well it had been costly—the boys had ripped and razored the badges off every uniform.

The filming of *It Happened Here* was finally completed on May 26, 1964. It had taken only forty days to make . . . spread over eight years!

Now it was being pieced together into a finished product, the two young directors turned to the next step—that of distribution. They soon found that although all their previous setbacks had been mastered in the end, getting the film shown was to prove the greatest headache of all. Kevin and Andrew mounted a series of screenings for potential distributors.

They were invited to show the film at various film festivals: Cork (at which the Russians invited it to the Moscow Film Festival); Mannheim (where it was not very well received) and London which resulted in considerable publicity in the next day's papers. It then went to the Cannes Film Festival where it won two awards.

**The German units surrender. The little village of Eashing in Surrey was used as a background to the final sequence.**

Finally *It Happened Here* was accepted by United Artists for world distribution. However, the discussion scene, filmed at the Rembrandt Hotel, raised a storm of protests from Jewish organisations. This scene was unique as it was filmed spontaneously and showed a real British Nazi, Frank Bennett, giving his own obsessional answers to questions fired at him by Pauline. The whole idea of the self-condemnation of this piece was missed by the critics, and it was seen as a piece of Nazi propaganda. United Artists insisted on its removal. Kevin and Andrew tried every way to get them to change their mind to show the film as they had made it. But, faced with the option of accepting the cut or taking the film elsewhere, they had no alternative but to accept the ultimatum.

Kevin Brownlow still remembers vividly:

'May 1, 1966: the most satisfying sight I can remember. The *Thunderball* display being removed from the front of the London Pavilion, and being replaced with a huge picture of German troops marching past Big Ben and, in large red letters, IT HAPPENED HERE—the story of the German occupation of England.

'Although the film made £23,000 at its Pavilion run, the money, we were told, was completely absorbed by distribution and advertising costs. The film was shown in New York, Los Angeles, Paris, Stockholm, Copenhagen, Haifa and elsewhere with very favourable press reaction. Nevertheless, we made no money. On the official returns, promotion costs swallowed up our profits. *It Happened Here* had a final negative cost of £7,000. The trailers for the picture, lasting three minutes but produced professionally, cost $4,298. Our eight years of production netted us not one penny.'

# THE BATTLE OF TAKROUNA

## By John Laffin, M.C.

By April 14, 1943 the retreating Germans and Italians in North Africa had stopped the Eighth Army on the coastal plain south of Enfidaville in Tunisia and, after an exploratory thrust, the British paused to study the situation. The result was that while British and American troops in the north were to drive for Tunis, Montgomery's Eighth Army was to attack in the south, to pin down enemy troops and to deceive the Axis Command into believing that the southern attack was the main one.

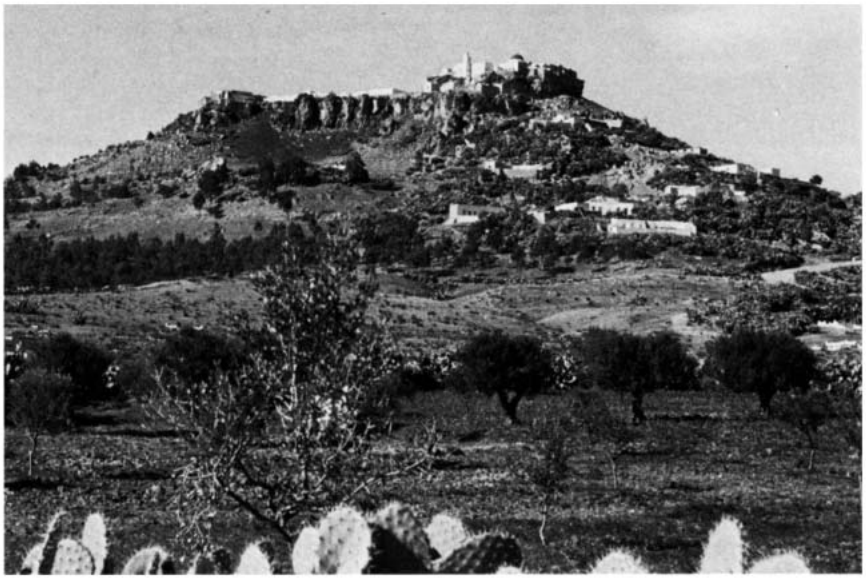
The Battle of Takrouna was one of the key actions of the larger struggle for Enfidaville, and it was the most severe. The hill of Takrouna was the key to the front, for without it the guns would not be able to move up to cover any other ground won during the attack. Under direct observation from Takrouna, they would be exposed to enemy counter-battery fire.

General Messe, commanding the Axis First Army, had correctly appreciated the importance of Takrouna hill and had made it into an independent strongpoint, his idea being to take the sting out of the British attack and force the British commanders to use the valleys, where their troops could be more readily attacked. Messe supplied the garrison with enough food and ammunition to hold out for a long time.

Knowing that the defenders of such an isolated outpost would need great will to resist, he included a stiffening of Germans in the predominantly Italian garrison and ordered them to hold out to the last. General La Ferla, commanding the Italian Trieste Division, publicly exacted from the garrison commander his oath to resist to the last man.

The New Zealand Division, which had been continually in action for ten months, was assigned the task of its capture. General Freyberg called it the hardest operation in the North African campaign, a considerable claim, considering the Easter battle of Tobruk, the New Zealanders' action at Sidi Rezegh in November 1941 and Alamein, among other battles.

That Takrouna was such an epic is not surprising, for the New Zealanders, according to many military leaders, war correspondents and historians, were the finest troops ever to fight in North Africa and Rommel himself regarded them as the most intelligent of all the Allied troops in this theatre.

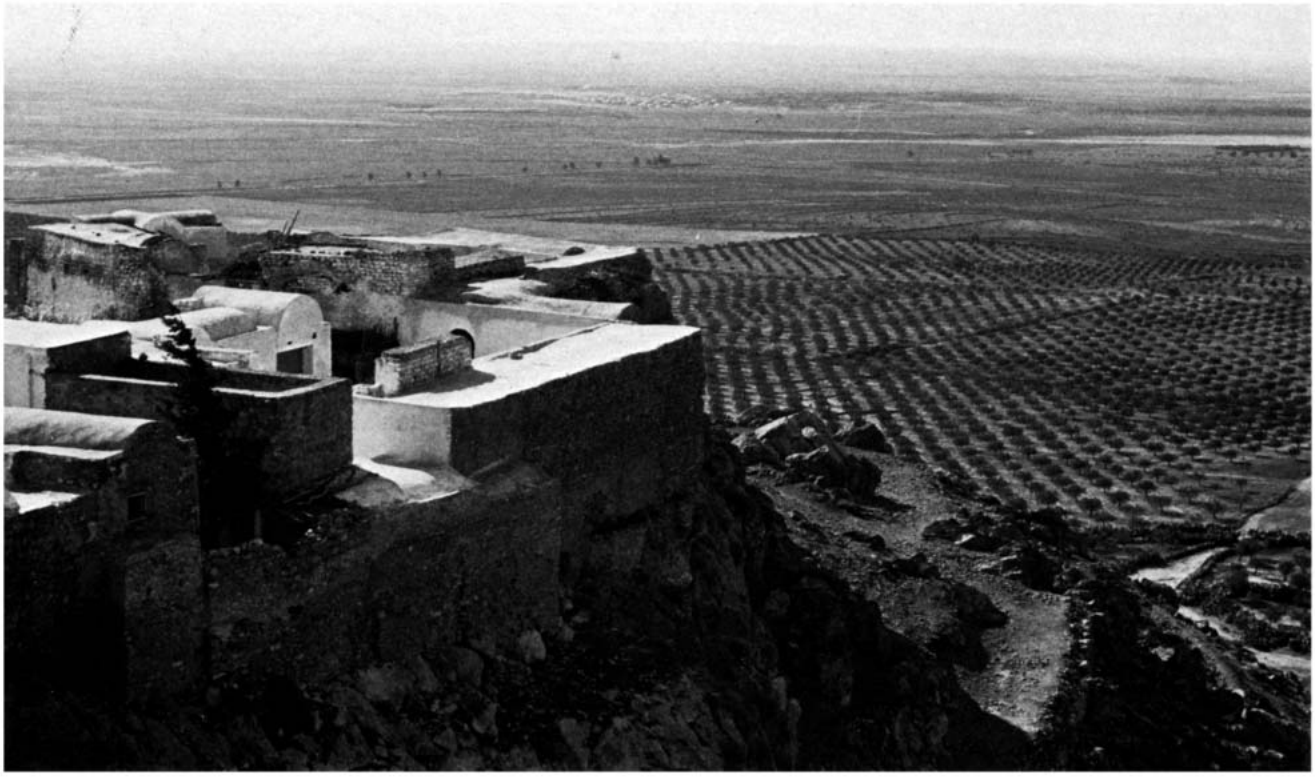


**Top: Takrouna village, on top of a 600ft hill provided the Axis forces with an excellent observation post in the battle for Enfidaville. Seen here after its capture under German shellfire (IWM). Above: Our 1976 comparison — the mosque can be seen on the right.**

The 5th Brigade, comprising the 21st, 23rd and 28th Battalions under Brigadier Kippenberger, was to capture several objectives including Takrouna, a 600-foot, rocky, precipitous outcrop crowned by buildings. Among these were a domed mosque, an old Berber fort and a village of mud and stone houses. Neat olive orchards enclosed by ditches and tough cactus hedges covered much of the ground south of Takrouna. On the west was rough, broken country slashed by a deep *wadi* and on the east was a more regular valley. The position was protected by minefields, and, as little vegetation existed on any side, the attacking troops would have little cover from the many Italian and German machine guns and mortars.

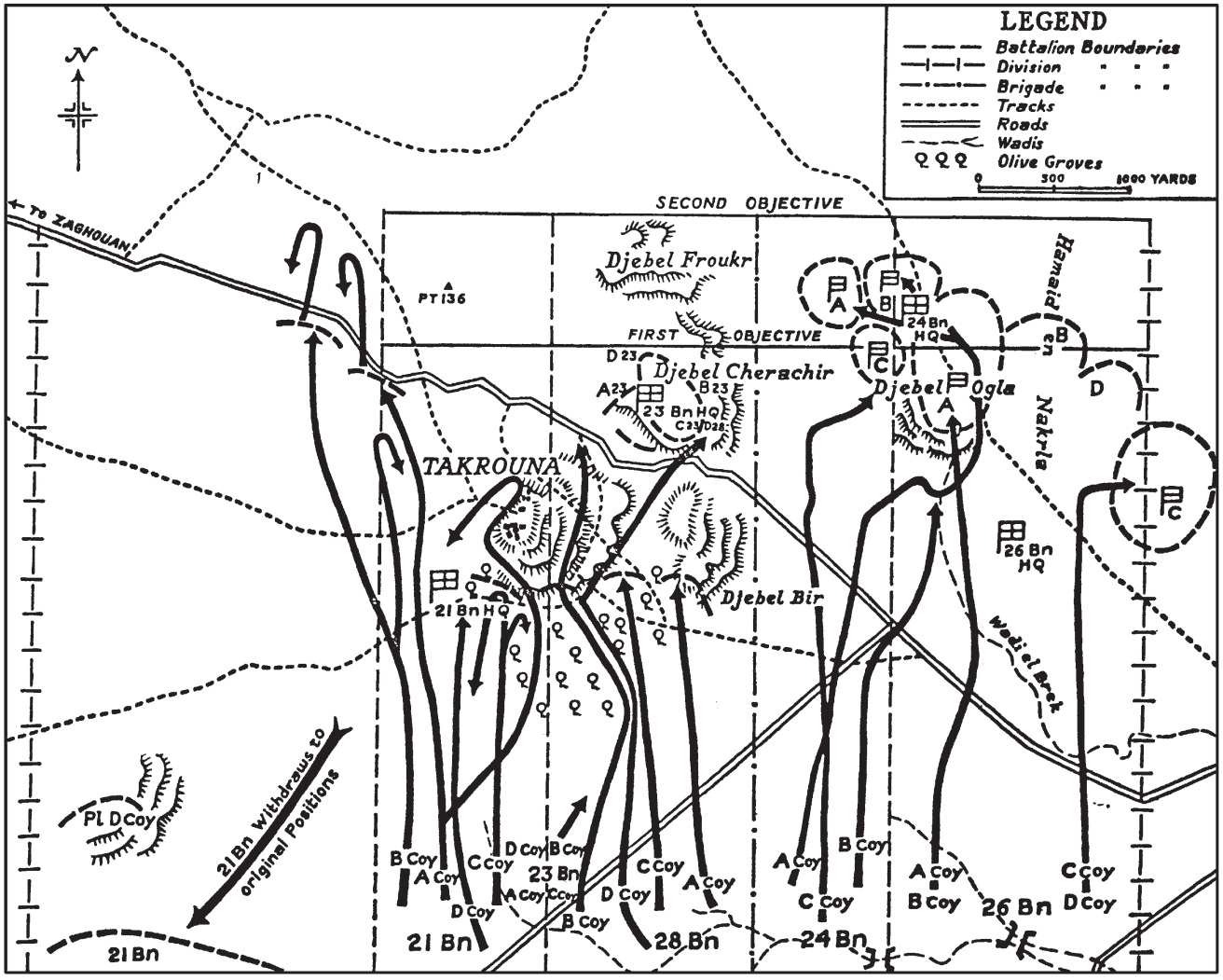
At 11.00 p.m. on April 19, British artillery opened on the enemy positions and fired until 6.00 a.m. next morning, but as usual the enemy troops were not nearly so demoralized as expected, partly because their dispositions were quite unknown to the British and New Zealand artillery, which had done relatively little damage.

The New Zealand plan of attack was simple and efficient, and each brigade was supported by a regiment of tanks, some of which were ordered to help the engineer detachments that were to clear tracks through the minefields. Three were attached to the Maori Battalion to crush passages through the spiky cactus. The Maoris, under Lieutenant-Colonel C. M. Bennett, had the onerous responsibility of capturing the hill, preferably from the rear



Above: Looking south-east from Takrouna to the open desert across which the New Zealanders had to advance under the clear view of the defenders.

Below: The battle of Takrouna. The diagram shows company positions and lines of advance. (Courtesy of War History Branch, Department of Internal Affairs, N.Z.)



**Above left: A captured gun position on the lower slopes of Takrouna (IWM). Above: Apart from the neat plantation in the background, the desert has changed little over thirty years and shrapnel can still be found lying on the surface.**

along the easier slopes but possibly up the steep southern or eastern slopes.

The infantry, tense but confident, advanced behind the thunderous artillery barrage, but almost at once ran into trouble, including unexpectedly vicious machine gun fire as well as bursting shells and mortar bombs. The minefields, cactus hedges, ditches and booby traps caused loss of formation in the darkness, and casualties mounted. A Company had all three platoon commanders wounded, and then the company commander, Major W. Porter, was hit by a mortar bomb, leaving the company at half strength and without officers.

In the centre C Company encountered so much fire that only one lieutenant remained unwounded, and though he tried to continue the advance, before long he had only three men with him and had to abandon the attempt.

On the left, B Company, led by Captain C. Sorenson, hacked its way through cactus hedges and reached the south-eastern end of Takrouna, where the men were stopped by such heavy fire that the air was thick with bullets and shell fragments.

Lieutenant-Colonel Bennett tried desperately to link some of his companies and to get the attack under way again, but all his efforts failed, and he was seriously wounded by a mine, so that before long all direction was lost and the action was continued by the few remaining officers and N.C.O.s, in a series of hazardous attacks.

D Company, under Captain P. F. Te H. Ornberg, which was originally supposed to mop up, now became an attacking company, but it had a strength of only forty, including a few stragglers from other companies.

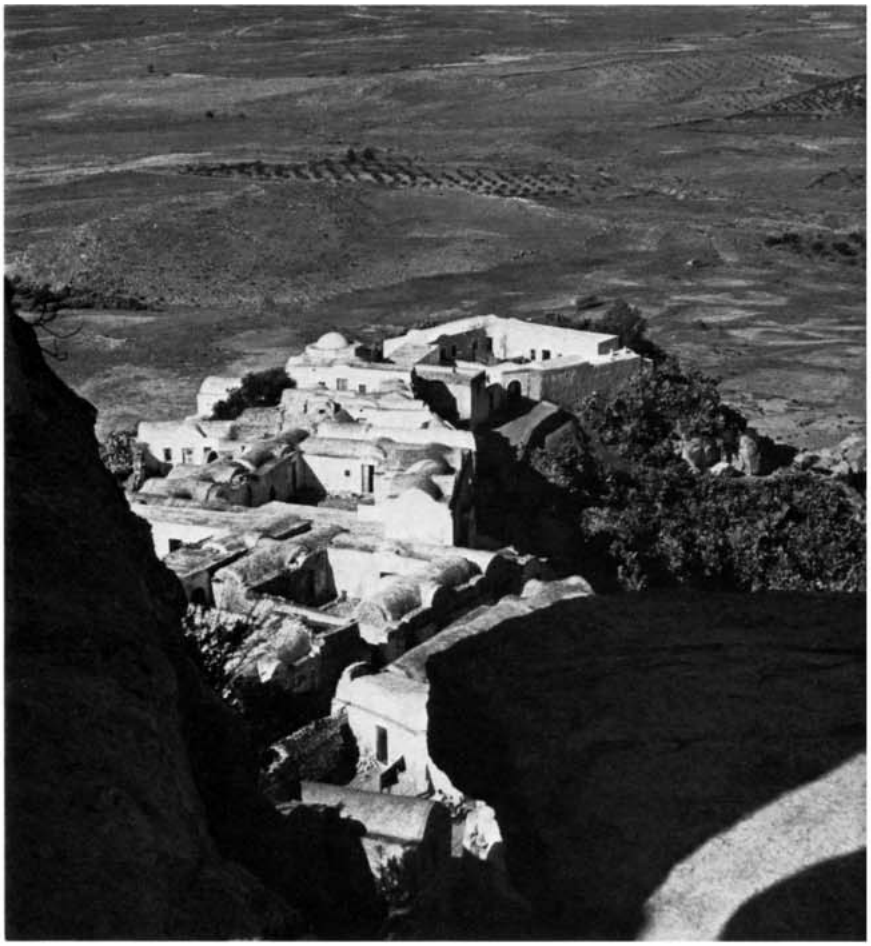
The adventurous assault on Takrouna itself was one of sheer military impudence, a classic example of initiative and leadership—for it was made by only thirteen men. Twelve of them were the survivors of the 10th Platoon of the 28th Battalion and were led by Sergeant J. Rogers and Lance-Sergeant H. Manahi. The odd man out was Sergeant W. J. Smith, a stray from the 23rd Battalion. Rogers and Manahi divided their tiny force and at dawn Rogers took his party up the south-east face, while Manahi attacked up the south-west with the ambitious but confident intention of meeting at the top.

Despite small arms and mortar fire the New Zealanders were soon in action with bayonets, grenades and light machine guns. They took one weapon pit after another. So fierce was their assault that white flags shot up all around the base of Takrouna. Single-handed, Private H. Grant took sixty Italian prisoners.

Sergeant Smith and Private K. Aranui reached the rock face and struggled up with the aid of telephone cables linking enemy headquarters with the posts below. After a stiff climb they reached the top of a stone wall and looked down into a courtyard, where a lone German radio operator sat open-mouthed in astonishment and surrendered to them. Smith then took prisoner an artillery observation officer and chatted with him over a smoke before sending him back to captivity. More of the little party arrived. Exploration showed that they were on a rock ledge covered with buildings, through which Smith ran after an Italian; a zig-zag chase along narrow paths which brought him on to the pinnacle of Takrouna and on to a platform. From here he looked down at the village itself, where Italian soldiers moved around carelessly until Smith fired at them. The sight of Maoris on the summit was tremendously heartening to Brigadier Kippenberger and his staff below.

Rogers and Manahi, expecting a counter-attack at any minute, had made their ledge position defensible by mid-morning and reinforced it with some 23rd Battalion strays whom they called up the hill.

Throughout the day, the Takrouna outpost was heavily shelled and mortared, the bombs bursting on the stone with devastating effect. The Maoris fought back. Lance-Corporal H. Ruha, for instance, taking up a position in the mosque's dome, machine-



**Looking from the pinnacle in a south-westerly direction to the village of Takrouna as seen by Sergeant Smith when he reached the top. The New Zealanders held the rocks in the foreground.**

gunned the crew of two guns, preventing them from operating and from withdrawing. But the little party was terribly vulnerable, and Sergeant Rogers was killed and five others killed or wounded. Sergeant Manahi sent down the hill for reinforcements and later scrambled down himself to collect a section of riflemen, stretcher bearers, food and ammunition from his own C Company. Then he hurried back towards Takrouna, shrouded intermittently with smoke and stone dust.

Back on the ledge, Manahi was now able to post men at all vital points, and at 3.30 p.m. the relief platoon under Lieutenant Shaw arrived. Before Manahi could withdraw his men the enemy counter-attacked through a tunnel in the rock. A bitter and bloody struggle followed with the Maoris completely outnumbered. Manahi and Lance-Corporal J. P. Bell mowed down some Italians with machine gun fire while other Maoris shot and bayoneted and pushed enemy soldiers over the cliff. The Italians had made the mistake of tossing grenades into a building serving as a hospital, and this roused the Maoris to fury.

The fight had reached the critical stage when Captain J. C. Muirhead, an observation officer of the 5th Field Artillery Regiment, intervened. Muirhead had been on the far side of the pinnacle and, seeing the enemy counter-attack, collected a few Maoris and with tommy-guns blazing charged into the fight. This made the enemy force withdraw, taking three prisoners with them.

The enemy commander had by now sent urgently for help, and by 2.00 p.m. shock troops of the Folgore Battalion began to arrive. Some companies of the battalion were paratroops and therefore well-trained tough soldiers. The battalion was assembled by 4.00 p.m., ready for an all-out attempt to push the New Zealanders from every part of the summit.

Lieutenant Shaw saw that the Maoris were now exhausted, and sent Manahi back with them to their battalion, together with a request for further reinforcements. A second platoon from the 21st Battalion, led by Lieutenant I. H. Hurst, arrived at about 9.00 p.m. that night. They had come only just in time, for the enemy launched the Folgore Battalion in a fierce counter-attack. This time the enemy were more successful, for they captured the pinnacle and were in process of clearing the ledge when the New Zealanders rallied and drove the Italians and Germans back to the pinnacle, where they took up positions in the mosque and other buildings.

Fighting went on until just before dawn on April 21, by which time the situation was a desperate stalemate, with the New Zealanders in the poorer position, for the enemy positions overlooked their own. Kippenberger ordered the 28th Battalion to send reinforcements up

**Above: This is the ledge position captured and held by Sergeant Rogers and Lance-Sergeant Manahi and gives a good idea of the importance of Takrouna as an observation post. Below: Photographed on April 24, 1943, this is one of the many anti-tank positions captured during the night attack (IWM). We couldn't trace its location today.**

**Left: After the battle, officers from a Chinese Military Mission inspect the anti-tank ditch just north of Enfidaville (IWM). Above: Thirty years exposure has smoothed its contours considerably.**

the hill, under Sergeant Manahi if possible, signifying that he was not ordering the sergeant back to the battle on the crest. With Sergeant Manahi anything was possible, and soon he led twelve men up to the ledge, where he discussed with Lieutenant Hurst—Shaw having been wounded—how to hold the position and force the enemy from the pinnacle.

After an unsuccessful attempt to drive them out with heavy and light mortars, a 25-pounder was with great difficulty ranged onto the main target. Only three direct hits were scored from fifty rounds, but these drove the enemy out, as Manahi found when he led a party to the pinnacle.

Soon after midday the enemy again cascaded the ledge and pinnacle with continuous mortar fire, but by now the Brigade signallers had managed to get a line through to the New Zealanders' position and the artillery observation officer was able to bring fire from the 5th Field Regiment to bear on the mortars. After about 320 rounds the mortars were silenced.

The village itself had now to be captured, but it was a difficult tactical proposition and Lieutenant Hurst asked Brigade Headquarters to have it softened up.

This was done with a new and still secret 'to be used in emergencies only' 17-pounder, and its solid shells, fired from near Brigade H.Q., began to smash the stone houses to rubble. During the gunfire Sergeant Manahi took a squad of Maoris and crept up on enemy posts on the south-east slopes, taking several weapon pits with grenade and bayonet and amassing prisoners as he proceeded. Then, seeing the impact the 17-pounder was having on the village, Manahi knew the moment had arrived for decisive action, and led some of his party towards it. Lieutenant Hurst, meanwhile, without any prior agreement with Manahi, took another small party and went right round to the north side of the village, rounding up some enemy and driving others towards Manahi on the other side. This took a little time and there were many fierce little actions, but it led to the end of resistance on Takrouna. The strongpoint had fallen after forty-eight hours of continuous action. Between them Hurst and Manahi took 323 prisoners.

**Top: Prisoners march south, through a tape-marked gap in a minefield, beside the Wadi Carth bridge, north of Enfidaville (IWM). Above: The bridge, blown by the Germans, is now repaired — whether all the mines have been removed is another matter!**

*Because they 'own' the battle, New Zealanders cannot very well give it all the praise it deserves for fear of being considered vainglorious. The plain truth is that the struggle for Takrouna, although costly in casualties, brought out as much gallantry, initiative, enterprise, efficiency and persistence as any action of comparable duration in history—and more than most. Every quality of the New Zealand soldier was evident in this battle. Unfortunately, because it was fought by only a brigade and because a divisional encounter seems to be the minimum that attracts many historians, it has received too little publicity, even in New Zealand.*

*The full normal infantry strength of a brigade is about 2,700, each of three battalions having about 900 men, but on this occasion Brigadier Kippenberger had an infantry fighting strength of fifty-six officers and 1,006 men—341 in the 21st Battalion, 363 in the 23rd and 302 in the 28th (Maori) Battalion. This numerical weakness must be remembered when considering the task and the achievement.*

*At another point of the battle, Private T. Heka of the 28th had made an attack so audacious that it must rank as one of the most remarkable in Anzac military history. Quite alone, and supported only by two tanks at long range—the picture of two tanks supporting a lone infantryman is oddly piquant—Heka advanced up the Djebel Bir and in a furious series of actions which completely demoralized the enemy he captured an anti-tank gun and three machine-gun posts, killed several enemy and took fourteen others prisoner. Then, having carried the position, he held it until reinforcements arrived. The German report on the battle noted that Djebel Bir was 'overrun' after a vigorous resistance.*

*It would appear, from letters received from our readers, that many are under the impression that North Africa remains littered with knocked-out tanks and is still cluttered with war material. Nothing could be further from the truth.*

*In the case of Tunisia, which then belonged to France, all firearms, guns and tanks were*

Left: The battle is over and infantry of the Queen's Regiment march through Enfidaville on their way north (IWM). Above: Although the signpost has been moved, this is the same spot in North Africa nearly thirty-three years later.

*cleared quickly by the French to prevent them falling into 'nationalist' hands. By 1944, little remained and, although we didn't venture right into the Tunisian interior, only one tank could be found set up as a memorial on the famous 'Longstop Hill'.*

*Takrouna and the surrounding hills have changed little since the battle thirty years ago. Crumbling weapon pits and trenches ring the hill. Shrapnel is abundant, still lying on the surface of the ground. In North Africa one is continually worried about the inadequate mine clearing which took place at the end of the war and this was forcefully brought home to us when we were proudly shown an unexploded bomb sticking out of the ground in a field at the base of the hill!*

**An unexploded bomb in a farmer's field below Takrouna hill today.**

Above: Trenches still ring Takrouna. This photograph was taken from Djebel Bir. Below: The memorial to the New Zealanders erected by the French at the foot of the hill on the north-west side. This is the side opposite to that stormed by the New Zealanders.

*However, if the visitor sticks to the roads and tracks, the only danger comes from the hordes of children which descend on the tourist wherever a stop is made. This makes a visit to Takrouna village a desperate battle to try to retain as much personal property as possible. Handfuls of cigarettes or small coins freely distributed are the best defence.*

*The walls of the village are still damaged and pockmarked from the battle and one local lad was pleased to show us the hoard of cartridge cases he had collected. The battle is commemorated today by a memorial at the foot of Takrouna erected by the French after the war.*

*The New Zealanders lost thirty-four officers and 425 men killed, wounded, or missing during the action—many being buried in nearby Enfidaville War Cemetery. Sergeant John Rogers, killed on April 20, lies buried in Plot 7, Row A, grave No. 5. The Brigade had captured three field guns, nine 20mm Bredas, 72 heavy and 50 light machine guns and six mortars.*

*Sergeant Manahi and Private Heka were awarded only the Distinguished Conduct Medal—John Laffin, our author for the description of the battle, raises the point that many a VC has been awarded for actions involving less cold courage and achieving less success than their exploits.*